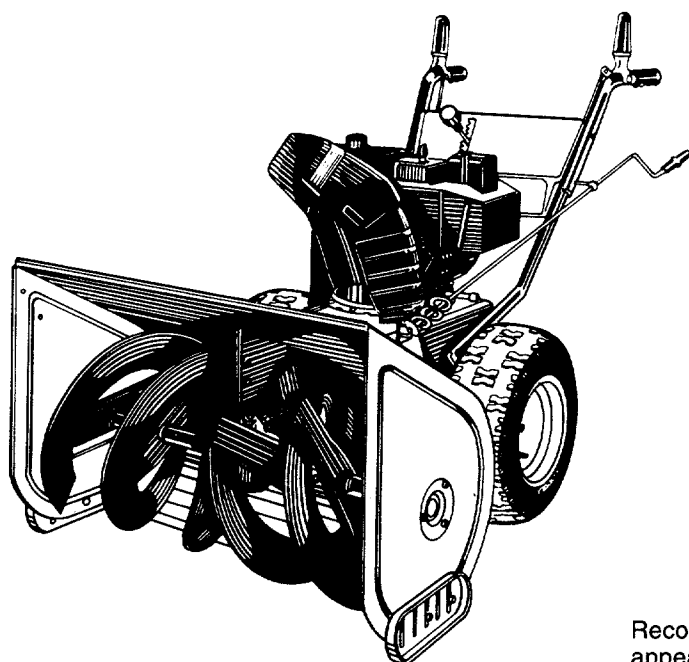


OWNER'S GUIDE

• ASSEMBLY • OPERATION • MAINTENANCE • PARTS •



33" SNOW THROWER

Model Number 312-9801000

IMPORTANT!

Record the **Model No.** and **Mfg. Code** which appear on your unit in the space below. You **must** have these numbers, along with the date of purchase, in order to receive warranty or service.

MEETS ANSI SAFETY STANDARDS

MODEL NO.

MFG. CODE




Made
in
AMERICA

Important: Read Safety Rules and Instructions Carefully

IMPORTANT

SAFE OPERATION PRACTICES



THIS SYMBOL POINTS OUT IMPORTANT SAFETY INSTRUCTIONS WHICH, IF NOT FOLLOWED, COULD ENDANGER THE PERSONAL SAFETY AND/OR PROPERTY OF YOURSELF AND OTHERS. READ AND FOLLOW ALL INSTRUCTIONS IN THIS MANUAL BEFORE ATTEMPTING TO OPERATE YOUR SNOW THROWER. FAILURE TO COMPLY WITH THESE INSTRUCTIONS MAY RESULT IN PERSONAL INJURY. WHEN YOU SEE THIS SYMBOL—  **HEED ITS WARNING.**



DANGER: Your snow thrower was built to be operated according to the rules for safe operation in this manual. As with any type of power equipment, carelessness or error on the part of the operator can result in serious injury. If you violate any of these rules, you may cause serious injury to yourself or others.



TRAINING

1. Read this owner's guide carefully. Be thoroughly familiar with the controls and proper use of the equipment. Know how to stop the unit and disengage the controls quickly.
2. Never allow children to operate equipment. Never allow adults to operate equipment without proper instructions.
3. No one should operate this unit while intoxicated or while taking medication that impairs the senses or reactions.
4. Keep the area of operation clear of all persons, especially small children and pets.
5. Exercise caution to avoid slipping or falling, especially when operating in reverse.



PREPARATION

1. Thoroughly inspect the area where the equipment is to be used and remove all door mats, sleds, boards, wires and other foreign objects.
2. Disengage all clutches and shift into neutral before starting engine.
3. Do not operate equipment without wearing adequate winter outer garments. Wear footwear which will improve footing on slippery surfaces.
4. Check the fuel before starting the engine. Gasoline is an extremely flammable fuel. Do not fill the gasoline tank indoors, while the engine is running, or while the engine is still hot. Replace gasoline cap securely and wipe off any spilled gasoline before starting the engine as it may cause a fire or explosion.
5. Use a grounded three wire plug-in for all units with electric drive motors or electric starting motors.
6. Adjust collector housing height to clear gravel or crushed rock surface.
7. Never attempt to make any adjustments while engine is running (except where specifically recommended by manufacturer).
8. Let engine and machine adjust to outdoor temperature before starting to clear snow.
9. Always wear safety glasses or eye shields during operation or while performing an adjustment or repair, to protect eyes from foreign objects that may be thrown from the machine in any direction.



OPERATION

1. Do not put hands or feet near rotating parts. Keep clear of discharge opening at all times.
2. Exercise extreme caution when operating on or crossing gravel drives, walks, or roads. Stay alert for hidden hazards or traffic. Do not carry passengers.
3. After striking a foreign object, stop the engine, remove wire from spark plug, and thoroughly inspect the snow thrower for any damage. Repair the damage before restarting and operating the snow thrower.
4. If the snow thrower should start to vibrate abnormally, stop the engine and check immediately for the cause. Vibration is generally a warning of trouble.

5. Stop engine whenever you leave the operating position, before unclogging the collector/impeller housing or discharge guide, and making any repairs, adjustments, or inspections.
6. Take all possible precautions when leaving the unit unattended. Disengage the collector/impeller, shift into neutral, stop the engine, and remove the key.
7. When cleaning, repairing, or inspecting, make certain collector/impeller and all moving parts have stopped. Disconnect spark plug wire and keep away from plug to prevent accidental starting.
8. Do not run engine indoors, except when starting engine and transporting snow thrower in or out of building. Open doors. Exhaust fumes are dangerous.
9. Do not clear snow across the face of slopes. Exercise extreme caution when changing direction on slopes. Do not attempt to clear steep slopes.
10. Never operate snow thrower without guards, plates, or other safety protection devices in place.
11. Never operate snow thrower near glass enclosure, automobiles, window wells, drop off, etc., without proper adjustments of snow thrower discharge angle. Keep children and pets away.
12. Do not overload machine capacity by attempting to clear snow at too fast a rate.
13. Never operate the machine at high transport speeds on slippery surfaces. Look behind and use care when backing.
14. Never direct discharge at bystanders or allow anyone in front of unit.
15. Disengage power to collector/impeller when transporting or not in use.
16. Use only attachments and accessories approved by the manufacturer of snow thrower (such as wheel weights, counter weights, cabs, etc.).
17. Never operate the snow thrower without good visibility or light. Always be sure of your footing and keep a firm hold on the handles. Walk, never run.



MAINTENANCE AND STORAGE

1. Check shear bolts, engine mounting bolts, etc., at frequent intervals for proper tightness to be sure equipment is in safe working condition.
2. Never store the machine with fuel in the fuel tank inside a building where ignition sources are present, such as hot water and space heaters, clothes dryers, and the like. Allow engine to cool before storing in any enclosure.
3. Always refer to owner's guide instructions for important details if snow thrower is to be stored for an extended period.
4. Run machine a few minutes after throwing snow to prevent freeze up of collector/impeller.

ASSEMBLY

NOTE: This unit is shipped **WITHOUT GASOLINE** or **OIL**. After assembly, see separate engine manual for proper fuel and engine oil recommendations.

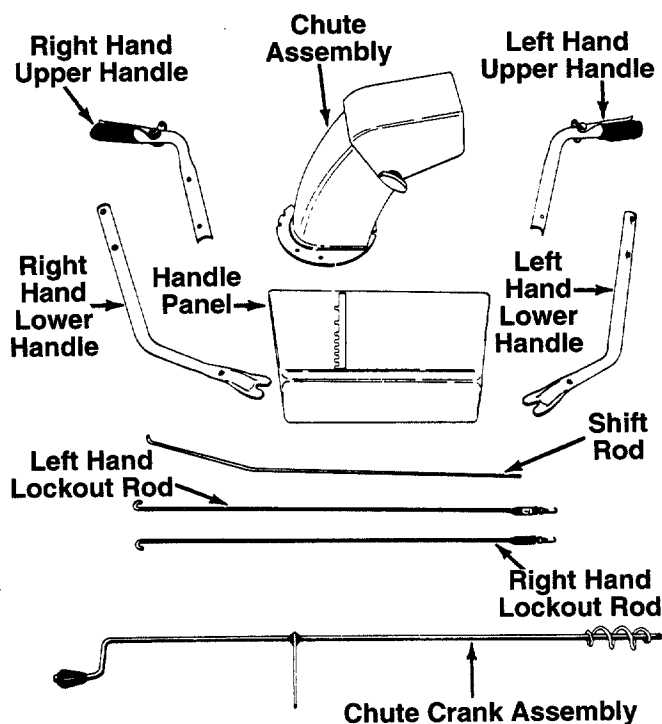


FIGURE 1.

Tools Required for Assembly:

- Screwdriver
- 9/16" Wrench
- 1/2" Wrench
- 7/16" Wrench
- 3/8" Wrench
- or One Adjustable Wrench

Loose Parts in Carton (see figure 1):

- (1) Upper Handle Assembly—L.H.
- (1) Lower Handle—L.H.
- (1) Upper Handle Assembly—R.H.
- (1) Lower Handle—R.H.
- (1) Handle Panel
- (1) Chute Assembly
- (1) Parts taped together which include:
 - (1) Right Hand Lockout Rod
 - (1) Left Hand Lockout Rod
 - (1) Shift Rod
 - (1) Chute Crank Assembly

Contents of Hardware Pack (see figure 2):

(Hardware pack may contain extra items which are not used on your unit.)

- A (2) Hex Bolts 3/8-16 x 2" Long
- B (2) Belleville Washers 3/8" I.D.
- C (7) Hex Nuts 5/16-18 Thread
- D (6) Belleville Washers 5/16" I.D.
- F (2) Flat Washers 5/16" I.D.
- G (1) Hairpin Clip
- H (2) Flat Washers 3/8" I.D. x 5/8" O.D.
- I (2) Carriage Bolts 5/16-18 x 3/4" Long
- J (1) Chute Crank Bracket
- K (1) Cotter Pin
- L (1) Compression Spring
- M (1) Hex Insert Lock Nut 5/16-18 Thread
- N (3) Chute Flange Keepers
- O (6) Truss Machine Screws 1/4-20 x 3/4" Long
- P (6) Flat Washers 1/4" I.D.
- Q (6) Hex Lock Nuts 1/4-20 Thread
- R (1) Shift Lever
- S (3) Carriage Bolts 5/16-18 x 2" Long
- T (2) Hex Bolts 5/16-18 x 13/4" Long*
- U (2) Hex Insert Lock Nuts 5/16-18 Thread*
- V (2) Ignition Keys (May be Attached to Engine)
- W (2) Carriage Bolts 5/16-18 x 5/8" Long†
- X (2) Lock Washers 5/16" I.D.†
- Y (2) Hex Nuts 5/16-18 Thread†
- Z (1) Shift Knob

†Optional Parts

*The augers are secured to the spiral shaft with two hex bolts and hex insert lock nuts (see ref. nos. 40 and 50 on page 22). If you hit a foreign object or ice jam, the snow thrower is designed so that the hex bolts will shear. Two replacement hex bolts and nuts are provided in the hardware pack for your convenience. Store in a safe place until needed.

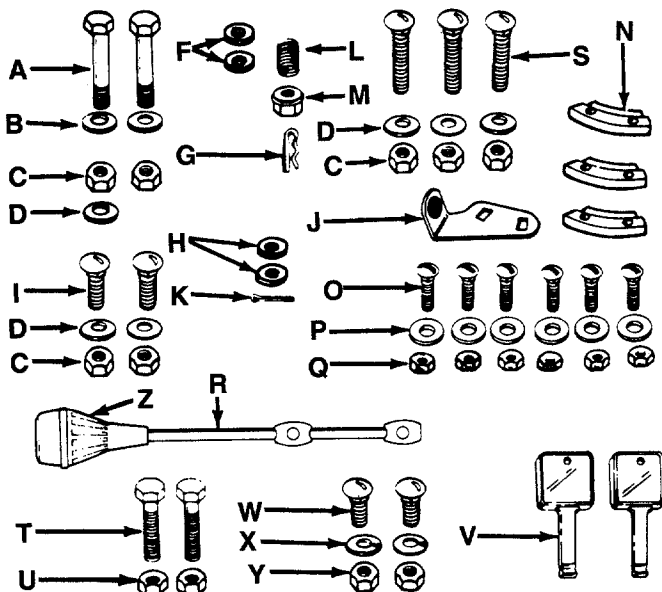


FIGURE 2.

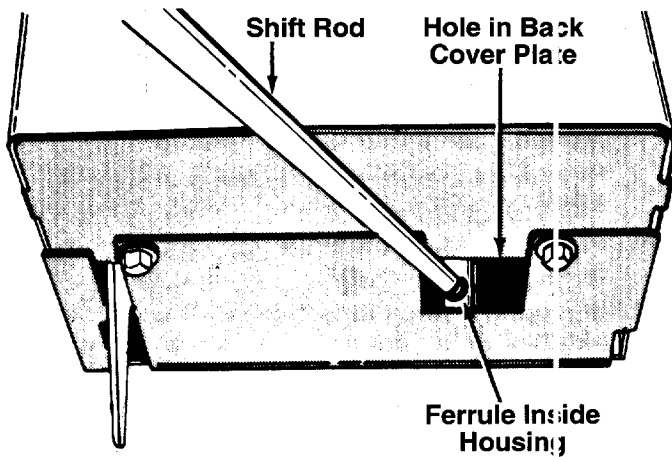


FIGURE 3.

1. Remove snow thrower and all parts from the carton. Check all carton inserts to be certain that all loose parts and literature have been removed before the carton is discarded.
2. Attach the shift rod to the shifting mechanism, located inside the snow thrower frame, as follows. See figure 3.
 - a. Place the threaded end of shift rod into the hole in the back cover.
 - b. Thread the shift rod into the ferrule which is attached to the shifting mechanism until the ferrule is approximately halfway down the threaded end of the rod. Adjustment of shift rod will be made in step 17.

NOTE: The shift mechanism is a movable assembly. It may be helpful to pull the linkage (and ferrule) closer to the opening in the back cover when assembling the shift rod.

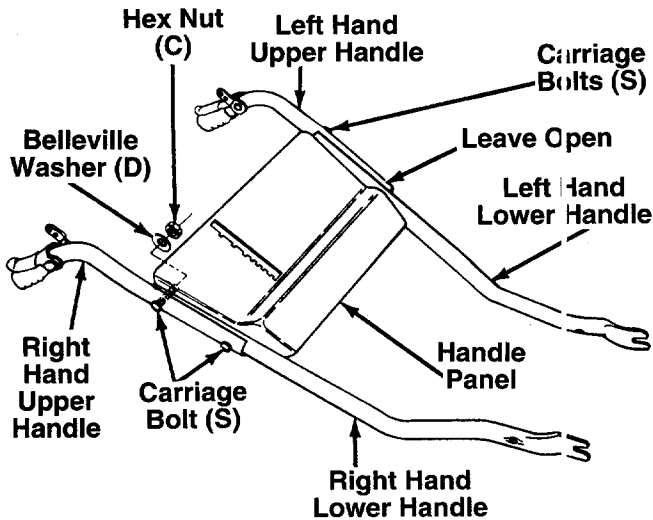


FIGURE 4.

3. Preassemble the handles to the handle panel as follows. See figure 4.
 - a. Place two carriage bolts (S) through the right hand upper and lower handles (both carriage bolts go through both handles).
 - b. Attach right hand handles to handle panel by placing carriage bolts through the holes in the handle panel.
 - c. Secure with two belleville washers (D) (cupped side of washer against the handle panel) and hex nuts (C). Do not tighten at this time.
 - d. Attach the left hand upper and lower handles in the same manner, using only one carriage bolt, belleville washer and hex nut in the **upper hole** on the handle panel. Leave bottom hole open.

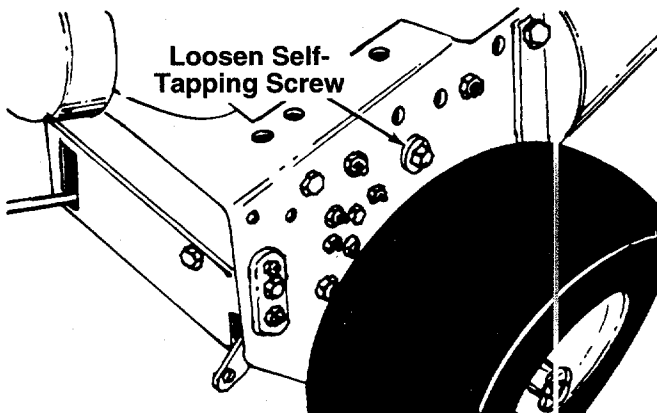
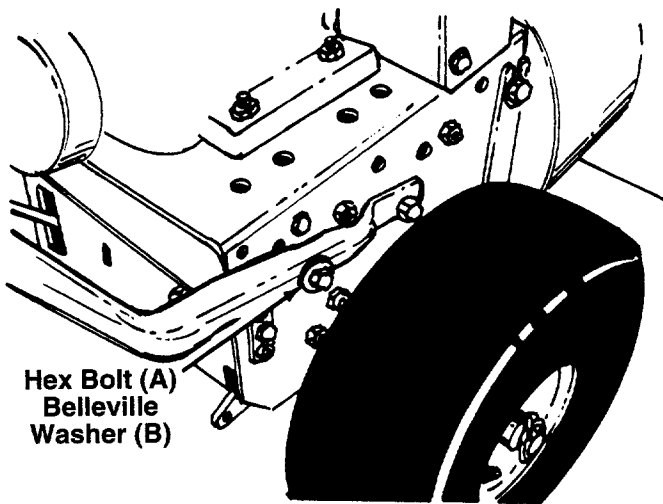


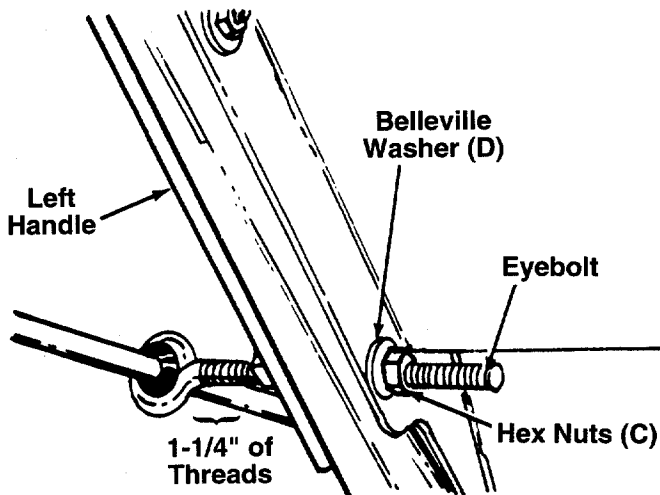
FIGURE 5.

4. To attach the handle assembly to the unit, loosen one self-tapping screw and belleville washer on each side of the unit. See figure 5. A 9/16" wrench or adjustable wrench is required.



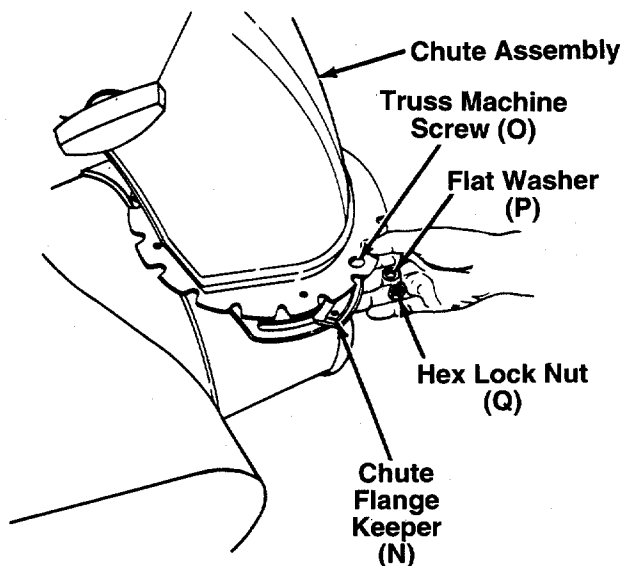
5. Slide the slotted end of the handles under the belleville washers on the self-tapping screws which were loosened in step 4.
6. Secure the upper hole in the handles with belleville washers (B) (cupped side against the handles) and hex bolts (A). See figure 6. Do not tighten at this time.

FIGURE 6.



7. Thread one hex nut (C) onto the eyebolt on the chute crank assembly until there is approximately 1-1/4" of threads showing between the nut and the head of the eyebolt. See figure 7.
8. Place the eyebolt into the lower hole in the left handle and handle panel. See figure 7. Secure with belleville washer (D) (cupped side against the handle panel) and hex nut (C). Do not tighten until after attaching the other end of the chute crank (step 14).
9. Tighten securely all bolts and nuts on the handle panel and all four bolts which secure the handles to the frame.

FIGURE 7.



10. Grease the chute opening using a multi-purpose automotive grease or equivalent.
11. Place chute assembly over chute opening, with the opening in the chute assembly facing the front of the unit. Place chute flange keepers (N) beneath lip of chute assembly. Secure with truss machine screws (O), flat washers (P) and hex lock nuts (Q) as shown in figure 8. Tighten with a 7/16" wrench, then back off 1/4 turn to allow easier movement.

FIGURE 8.

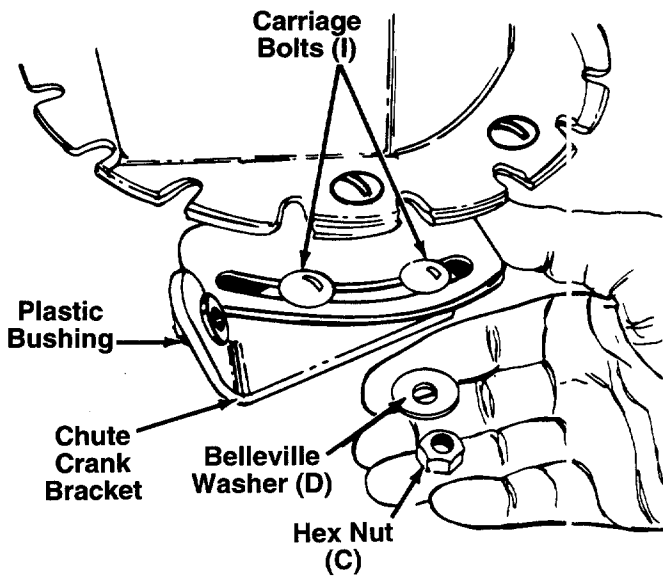


FIGURE 9.

12. Attach chute crank bracket to the extension on the left side of the chute opening (bracket goes beneath the extension) as shown in figure 9. Secure with carriage bolts (I), belleville washers (D) (cupped side of washers goes against the bracket) and hex nuts (C). Tighten finger tight only at this time.

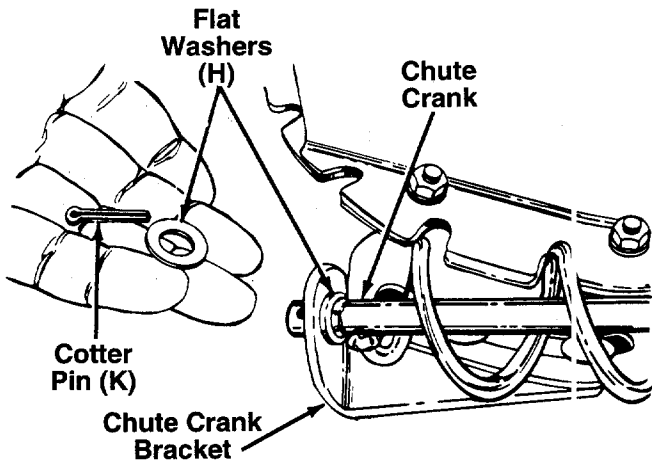


FIGURE 10.

13. Place one flat washer (H) on the end of the chute crank, then insert the end of the crank into the hole in the plastic bushing in the chute crank bracket. See figure 10. Place the other flat washer (H) on the end of the chute crank, and insert cotter pin (K) into hole in the end of crank. Secure by bending the ends of cotter pin in opposite directions.
14. Adjust the chute bracket so that the spiral on the chute crank fully engages the teeth on the chute assembly. Tighten the nuts on the chute crank bracket securely. Tighten the hex nuts on the eyebolt at the handle panel.

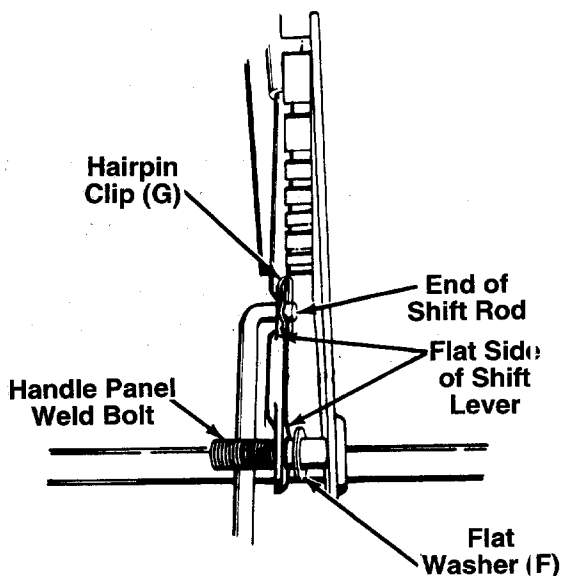


FIGURE 11.

15. Thread shift knob (Z) onto the shift lever (R).
16. Place one flat washer (F) over the weld bolt on the handle panel. Place shift lever (R) through slot in handle panel, with the flat side of shift lever against bracket on handle panel. Place the hole in the end of the shift lever over the handle panel weld bolt. See figure 11.
17. Place the shift lever in the fastest forward position (5th speed). Push the shift rod all the way forward (assembled to the ferrule in step 3). Thread the shift rod in or out of the ferrule as necessary until the end of the rod lines up with the hole in the shift lever. Insert end of rod into hole in shift lever and secure with hairpin clip (G). See figure 11.

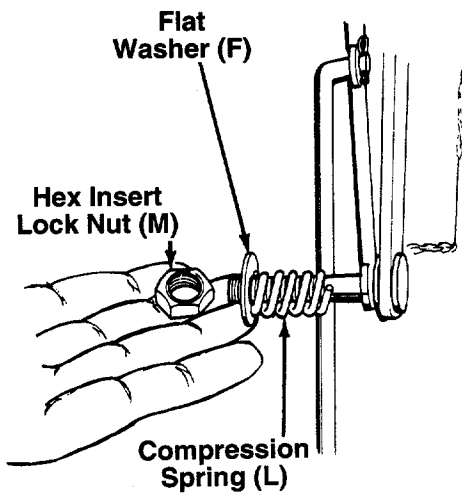


FIGURE 12.

18. Secure with flat washer (F), compression spring (L) and hex insert lock nut (M). See figure 12. Tighten lock nut until compression spring returns the shift lever into detent slots on handle panel.

NOTE: The adjustment of the shift rod must be checked as described in step 23 before the unit is operated.

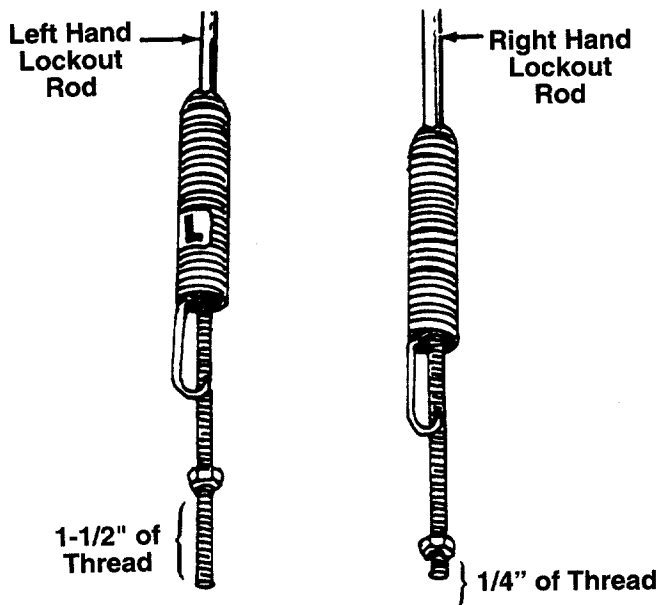


FIGURE 13.

19. There is a left and a right hand lockout rod. The left hand lockout rod is label "L".

Approximate initial settings for the lockout rods are as follows: The left hand lockout rod for the drive clutch should have approximately 1-1/2 inches of thread showing below the nut. The right hand lockout rod for the auger clutch should have approximately 1/4 inch of thread showing below the nut. See figure 13.

FINAL ADJUSTMENT MUST BE MADE AS DESCRIBED IN STEPS 21 AND 22. If the left hand lockout rod is not adjusted correctly, the shift lever cannot be shifted past neutral. If the right hand lockout rod is not adjusted correctly, the augers will not stop rotating.

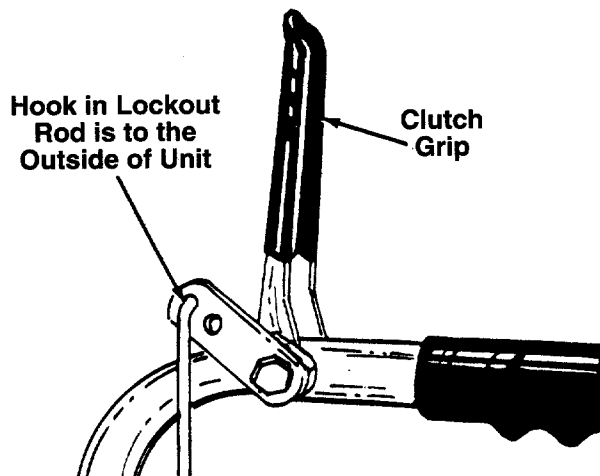


FIGURE 14.

20. Hook the right hand lockout rod into the top hole provided in the right hand clutch grip (auger clutch). See figure 14. Hook the left hand lockout rod (labeled "L") into the top hole in the left hand clutch grip (drive clutch). The hook is to the outside of the unit.

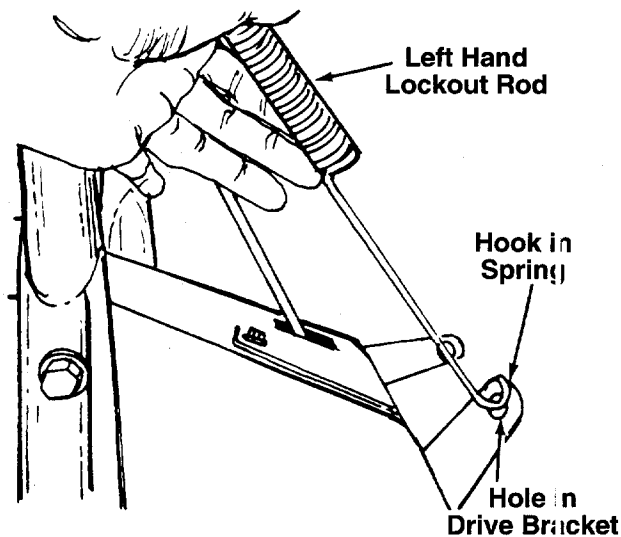


FIGURE 15.

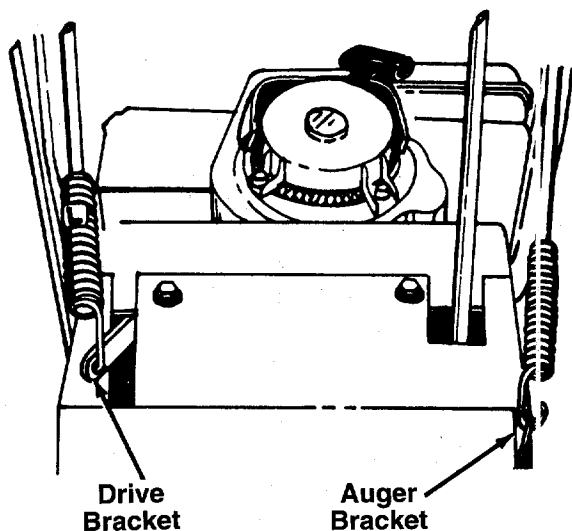


FIGURE 16.

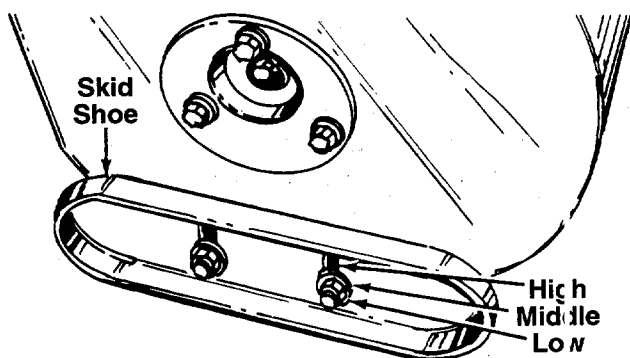


FIGURE 17.

21. Swing the left hand lockout rod down and simply hold it beside the drive bracket. Do not pull on spring. Do not move bracket. The hook on the end of the spring must line up with the center of the hole in the drive bracket. See figure 15.

If it does not, adjust the nut on the lockout rod by sliding the spring up and using a 7/16" wrench to move the nut on the end of the rod up or down as necessary until the hook on the spring aligns with the center of the hole in the bracket as shown in figure 15.



Hook spring into drive bracket. See figure 16.

22. Adjust the right hand lockout rod in the same manner as the left hand lockout rod. Refer to Step 21. When adjustment is correct, hook the spring into the auger bracket. See figure 16.



WARNING: There must not be any tension on either clutch rod spring with the drive or auger clutch grip in the disengaged (up) position. These clutches are a safety feature, and their function can be overridden if there is tension on either spring with the clutches disengaged.

23. Check for correct adjustment of the shift rod as follows.
 - a. Disconnect and ground the spark plug wire against the engine.
 - b. Place the shift lever in the neutral position. Push the unit back and forth. It should move freely.
 - c. Engage the drive clutch grip (located on the left handle) by squeezing the clutch grip against the handle. Push the unit back and forth. It should still move freely. If the wheels tend to lock up, adjustment is necessary.

To adjust the shift lever, place the shift lever in the fastest forward position (5th speed). Remove the hairpin clip which secures the shift rod to the shift lever (refer to figure 11), and remove the rod from the lever. Push the shift rod all the way forward. Thread the shift rod in or out of the ferrule one or two turns as necessary, until the end of the rod lines up with the hole in the shift lever. Insert end of rod into hole in shift lever and secure with hairpin clip. Recheck the adjustment.

24. The space between the shave plate and the ground can be adjusted. For close snow removal, place skid shoes in the low position. Use middle or high position when area to be cleared is uneven. See figure 17.



Adjust skid shoes by loosening the four hex nuts and carriage bolts and moving skid shoes to desired position. Make certain the entire bottom surface of skid shoe is against the ground to avoid uneven wear on the skid shoes. Retighten nuts and bolts securely.

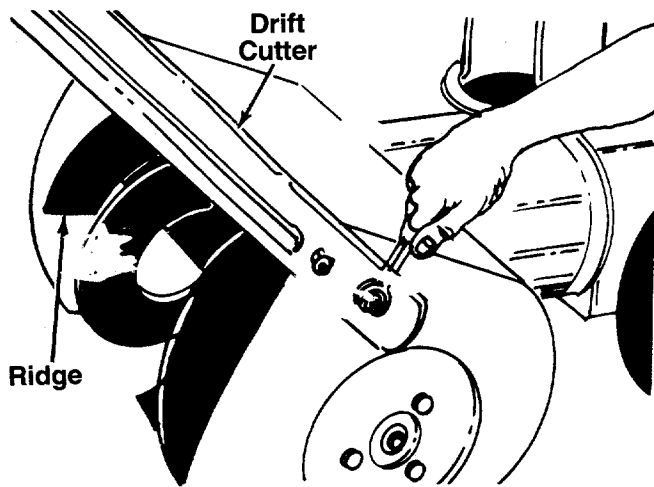


FIGURE 18.

OPTIONAL EQUIPMENT

1. If your unit is equipped with optional drift cutters, use a 1/2" wrench to remove the carriage bolts, lock washers and hex nuts holding the drift cutters to the auger housing. See figure 18. Turn and place the drift cutters in position (ridges on drift cutters go toward the outside of the unit). Secure with the hardware just removed, carriage bolts (W) (heads of bolts are to the inside of the housing), lock washers (X) and hex nuts (Y). Tighten securely.
2. If your unit is equipped with an optional electric starter which has not been installed at the factory, install at this time. Follow the instructions packed with the electric starter for installation.

TIRE PRESSURE (Pneumatic Tires)

The tires are over-inflated for shipping purposes. Check tire pressure and reduce to 15 to 20 psi.

NOTE: If the tire pressure is not equal in both tires, the unit may pull to one side or the other.

CONTROLS

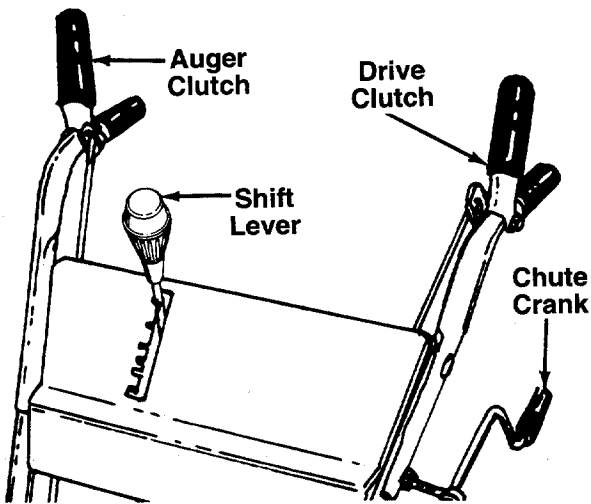


FIGURE 19.

SHIFT LEVER (See figures 19 and 20)

The shift lever is located on the right hand side of the handle panel. The shift lever may be moved into one of eight positions. Run engine with throttle in the fast position. Use the shift lever to determine ground speed.

- A. Center Position (N)—NEUTRAL.
- B. Forward Position—one of five speeds. Position number one (1) is the slowest. Position number five (5) is the fastest.
- C. Rear Position—Two REVERSE (R) speeds. "R" nearest the neutral (N) position is the slower of the two.



FIGURE 20.

DRIVE CLUTCH (See figure 19)

The drive clutch is located on the left handle. Squeeze the clutch grip to engage drive. Release to stop.

AUGER CLUTCH (See figure 19)

The auger clutch is located on the right handle. Squeeze the clutch grip to engage the augers. Release to stop the snow throwing action.

CHUTE CRANK (See figure 19)

The chute crank is located on left hand side of the snow thrower.

To change the direction in which snow is thrown, turn chute crank as follows:

1. Crank clockwise to discharge to the left.
2. Crank counterclockwise to discharge to the right.

THROTTLE CONTROL (See figure 21)

The throttle control is located on the engine. It regulates the speed of the engine.

SAFETY IGNITION SWITCH (See figure 21)

The ignition key must be inserted in the switch before the unit will start. Remove the ignition key when snow thrower is not in use.

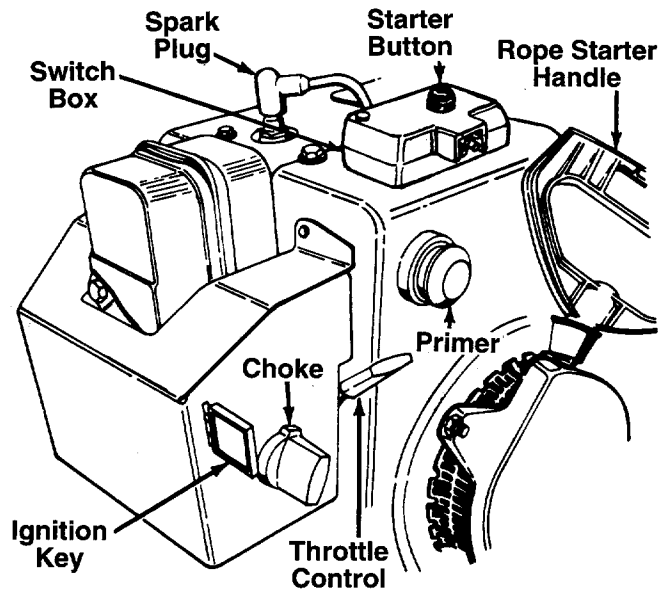


FIGURE 21.—Optional Electric Starter Shown

OPERATION

GAS AND OIL FILL-UP

Service the engine with gasoline and oil as instructed in the separate engine manual packed with your snow thrower. Read instructions carefully.

NOTE: Your snow thrower is shipped without oil; however, a small amount of oil may be present from the factory. Do not overfill.



WARNING: Never fill fuel tank indoors, with engine running or while engine is hot. Do not smoke when filling fuel tank.

TO START ENGINE

Electric Starter (Optional)

WARNING: The optional electric starter is equipped with a three-wire power cord and plug, and is designed to operate on 120 volt AC household current. It must be properly grounded at all times to avoid the possibility of electric shock which may be injurious to the operator. Follow all instructions carefully. Determine that your house wiring is a three-wire grounded system. Ask a licensed electrician if you are not certain. If your house wiring system is not a three-wire grounded system, do not use this electric starter under any conditions. If your system is grounded and a three-hole receptacle is not available at the point your starter will normally be used, one should be installed by a licensed electrician.

When connecting the power cord, always connect cord to starter on engine first, then plug the other end into a three-hole grounded receptacle.

When disconnecting the power cord, always unplug the end from the three-hole grounded receptacle first.

1. Attach spark plug wire to spark plug.
2. Make certain the auger and drive clutch levers are in the disengaged (released) position. Place the shift lever in NEUTRAL (N) position.
3. Move throttle control up to FAST position. Insert ignition key into slot. See figure 21. Be certain it snaps into place. Do not turn key.
4. Rotate choke knob to OFF position.
5. Connect power cord to switch box on engine. Plug the other end of power cord into a three-hole, grounded 120 volt AC receptacle.
6. Push starter button to crank engine. See figure 21. As you crank the engine, move choke knob to FULL choke position.
7. When engine starts, release starter button, and move choke gradually to OFF. If engine falters, move choke immediately to FULL and then gradually to OFF.

Recoil Starter:

1. Attach spark plug wire to spark plug.
2. Make certain the auger and drive clutch levers are in the disengaged (released) position. Place the shift lever in NEUTRAL (N) position.
3. Move throttle control up to FAST position. Insert ignition key into slot. See figure 21. Be certain it snaps into place. Do not turn key.

4. Rotate choke knob to FULL choke position (cold engine start).

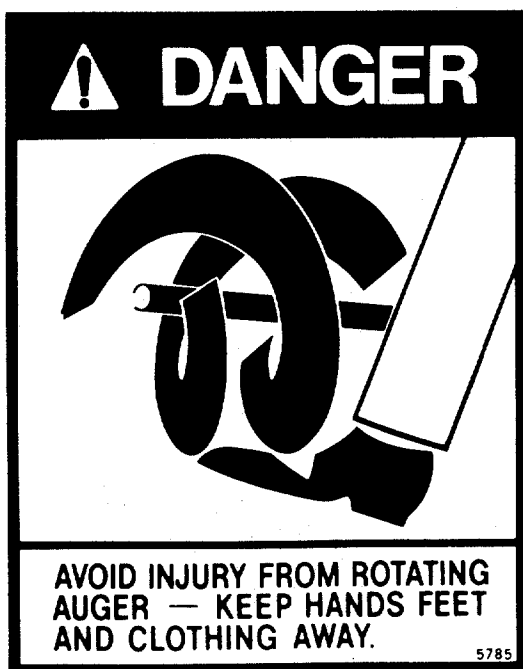
If engine is warm, place choke in OFF position instead of FULL.

5. Push primer button two or three times. See figure 21.

If engine is warm, push primer button once only.

NOTE: Always cover vent hole in primer button when pushing. Additional priming may be necessary for first start if temperature is below 15°F.

6. Grasp starter handle (see figure 21) and pull rope out slowly, until it pulls slightly harder. Let rope rewind slowly.
7. Pull starter handle rapidly. Do not allow handle to snap back. Allow it to rewind slowly while keeping a firm hold on the starter handle.
8. Repeat steps 6 and 7 until engine starts. If engine fails to start, repeat steps 5, 6 and 7 until engine starts.
9. As engine warms up and begins to operate evenly, rotate choke knob slowly to OFF position. If engine falters, return to FULL choke, then slowly move to OFF position.



TO STOP ENGINE

1. Run engine for a few minutes before stopping to help dry off any moisture on the engine.
2. To help prevent possible freeze-up of starter, proceed as follows.

Optional Electric Starter: Connect power cord to switch box on engine, then to 120 volt AC receptacle. With the engine running, push starter button and spin the starter for several seconds. The unusual sound made by spinning the starter will not harm engine or starter. Disconnect the power cord from receptacle first, and then from switch box.

Recoil Starter: With engine running, pull starter rope with a rapid, continuous full arm stroke three or four times. Pulling the starter rope will produce a loud clattering sound, which is not harmful to the engine or starter.

3. To stop engine, remove the ignition key. Do not turn key. Disconnect the spark plug wire from the spark plug to prevent accidental starting while equipment is unattended.

NOTE: Do not lose ignition key. Keep it in a safe place. Engine will not start without the ignition key.

4. Wipe all snow and moisture from the carburetor cover in the area of the control levers. Also, move control levers back and forth several times. Leave throttle control lever in the STOP or OFF position. Leave choke control in the FULL choke position.



TO ENGAGE DRIVE

1. With the engine running near top speed, move shift lever into one of the five FORWARD positions or two REVERSE positions. Select a speed appropriate for the snow conditions that exist. Use the slower speeds until you are familiar with the operation of the snow thrower.
2. Squeeze the drive clutch grip (located on the left handle) and the snow thrower will move. Release it and the drive motion will stop.

NOTE: NEVER move shift lever without first releasing the drive clutch.

TIRE CHAINS (Optional Equipment)

Tire chains should be used whenever extra traction is needed.

OPERATING TIPS

NOTE: Allow the engine to warm up for a few minutes as the engine will not develop full power until it reaches operating temperature.



WARNING: Temperature of muffler and surrounding areas may exceed 150°F. Avoid these areas.

1. For most efficient snow removal, remove snow immediately after it falls.
2. Discharge snow downwind whenever possible. Slightly overlap each previous swath.
3. Set the skid shoes 1/4" below the scraper bar for normal usage. The skid shoes may be adjusted upward for hard-packed snow. Adjust downward when using on gravel or crushed rock.
4. Be certain to follow the precautions listed under "To Stop Engine" on page 11 to prevent possible freeze-up.
5. Clean the snow thrower thoroughly after each use.

ADJUSTMENTS



WARNING: NEVER attempt to clean chute or make any adjustments while engine is running.

CHUTE ASSEMBLY ADJUSTMENT

The distance snow is thrown can be adjusted by adjusting the angle of the chute assembly. The sharper the angle, the shorter the distance snow is thrown. See figure 22.

To adjust chute assembly, loosen the hand knob. Pivot the top of the chute assembly to position desired. Retighten the hand knob.

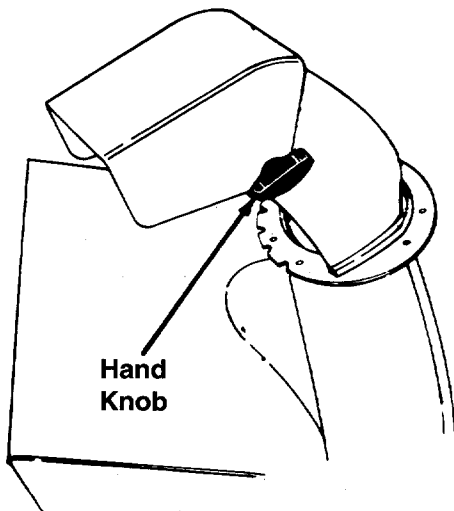


FIGURE 22.

SKID SHOE ADJUSTMENT

The space between the shave plate and the ground can be adjusted. Refer to step number 24 of the Assembly Instructions.

DRIVE AND AUGER CLUTCH ADJUSTMENTS

To adjust the drive or auger clutch, unhook the spring from the drive or auger bracket. Refer to steps 21 and 22 under Assembly Instructions for proper adjustment.

SHIFT ROD ADJUSTMENT

To adjust the shift rod, remove the cotter pin which secures the shift rod to the shift lever. Adjust as specified in step number 17 under Assembly Instructions.

CARBURETOR ADJUSTMENT



WARNING: If any adjustments are made to the engine while the engine is running (e.g. carburetor), keep clear of all moving parts. Be careful of heated surfaces and muffler.

Minor carburetor adjustment may be required to compensate for differences in fuel, temperature, altitude and load.

Refer to the separate engine manual packed with your unit for carburetor adjustment information.

DRIVE WHEELS

The snow thrower is equipped with a differential which makes the unit easy to maneuver. It may be adjusted for two different methods of operation. The adjustment is made by placing the klick pins in one of two different holes on each side of the unit. See figure 23.

1. Differential Action—Place klick pin in the outside hole in the axle. This position allows easy maneuvering when blowing light to medium snow.
2. Straight Axle Action—Place klick pin in the hole in the hub next to the rim on the right wheel. This position should be used when blowing heavy snow or when greater traction is needed (icy surfaces, etc.). The unit will be more difficult to maneuver.

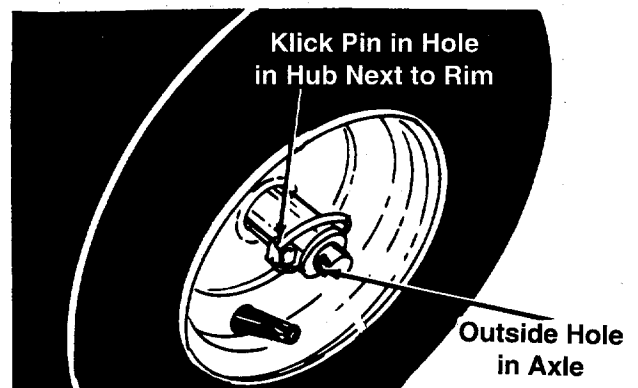


FIGURE 23.

LUBRICATION

CHAINS AND SHIFTING MECHANISM

Lubricate all chains, bearings, hexagonal shaft and round shaft with engine oil at least once a season or after every 10 hours of operation. See figure 24. Avoid getting oil on rubber friction wheel and aluminum wheel.

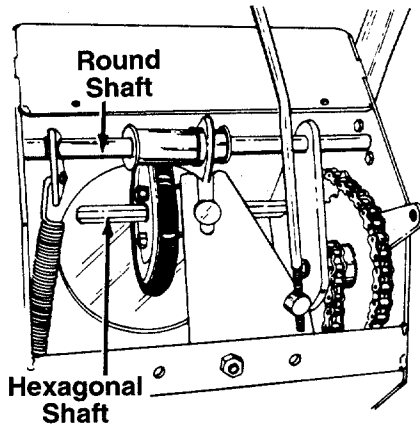


FIGURE 24.

CHUTE OPENING

Grease the chute opening once a season, using an automotive multi-purpose grease or equivalent. See figure 25.

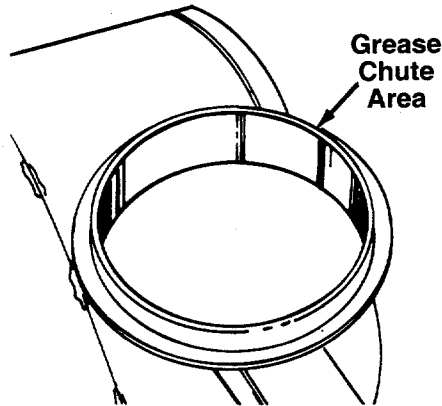


FIGURE 25.

WHEELS

Lubricate the bearings at the wheels with light oil at least once a season or after every 25 hours of operation. See figure 26.

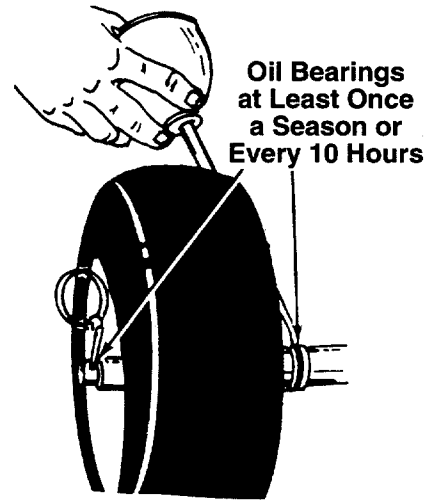


FIGURE 26.

GEAR CASE

The gear case is lubricated with 4 ounces of Shell Alvania grease EPR00 (order part number 737-0168). See figure 27.

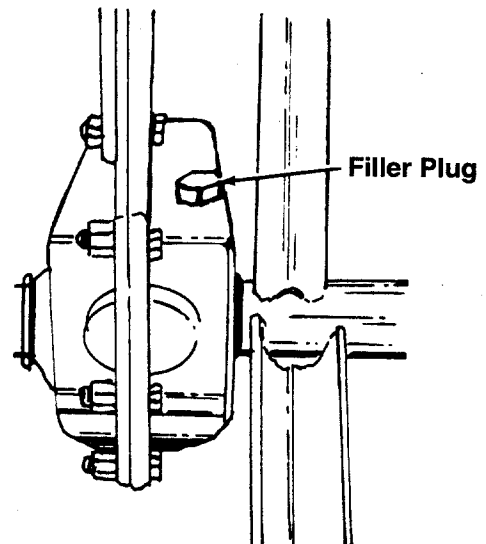


FIGURE 27.

DIFFERENTIAL

The differential is sealed at the factory and does not require checking. If disassembled for any reason, lubricate with 3/4 oz. of Sunaplex EP990 grease. Order part number 737-0120.

ENGINE

Refer to engine manual for engine lubrication instructions.

MAINTENANCE



WARNING: Disconnect the spark plug wire and ground against the engine before performing any repairs or maintenance.

AUGERS

The augers are secured to the spiral shaft with two hex bolts and hex lock nuts. See figure 28. If you hit a foreign object or ice jam, the snow thrower is designed so that the hex bolts will shear.

If the augers will not turn, check to see if the hex bolts have sheared. Two replacement hex bolts and hex lock nuts have been provided with the snow thrower. For future use, order part number 710-0891 (hex bolt 5/16-18 x 1.75" long) and 712-0429 (hex insert lock nut 5/16-18 thread).

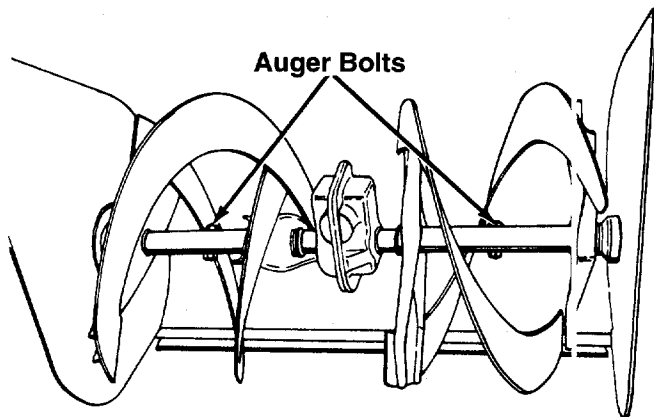


FIGURE 28.

SHAVE PLATE AND SKID SHOES

The shave plate and skid shoes on the bottom of the snow thrower are subject to wear. They should be checked periodically and replaced when necessary. Skid shoes are reversible for longer life. They may also be inverted to extend their life even further.

To remove skid shoes, remove the four carriage bolts, belleville washers and hex nuts which attach them to the snow thrower. Reassemble new skid shoes with the four carriage bolts, belleville washers (cupped side goes against skid shoes) and hex nuts.

To remove shave plate, remove the carriage bolts, belleville washers and hex nuts which attach it to the snow thrower housing. Reassemble new shave plate, making sure heads of the carriage bolts are to the inside of the housing. Tighten securely.

ENGINE

Refer to separate engine manual for all engine maintenance procedures.

BELT REMOVAL AND REPLACEMENT



WARNING: Disconnect the spark plug wire from the spark plug and ground. Drain gasoline from the fuel tank, or place a piece of plastic film underneath the gas cap to prevent gasoline from leaking.

To remove and replace either the auger drive belt or the drive belt, proceed with the following instructions.

1. Remove the chute crank at the chute assembly by removing the cotter pin and flat washer.
2. Remove the plastic belt cover on the front of the engine by removing the three self-tapping screws and flat washers. See figure 29.

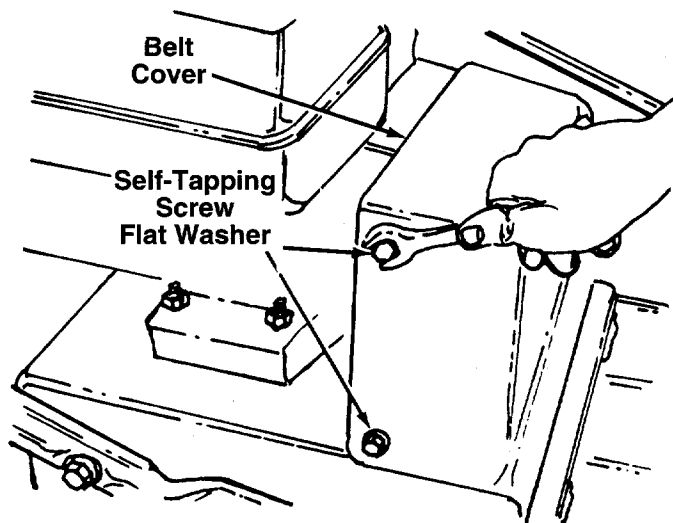


FIGURE 29.

3. Remove the large shoulder bolt and spacer on the right hand side of the engine pulley with an adjustable wrench. Remove the shoulder bolt and spacer from the idler bracket assembly with one hand. Use the other hand to catch the belleville washer which is on the shoulder bolt between the idler bracket and engine plate. See figure 30.

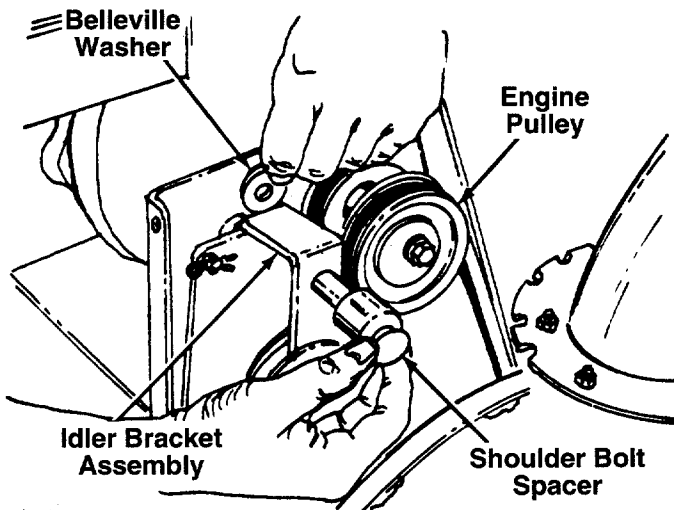


FIGURE 30.

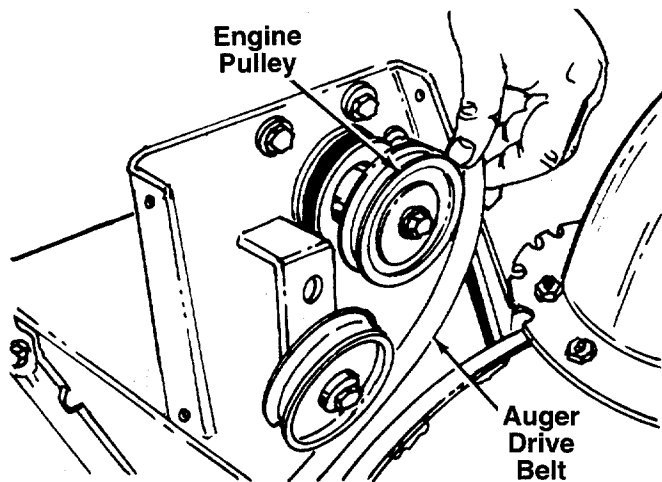


FIGURE 31.

4. Slip the auger drive belt (the front belt) off the engine pulley. See figure 31.
5. Remove the top screws and lock washers which attach the auger housing assembly to the frame assembly. A 9/16" wrench is required. See figure 32. Loosen (do not remove) the bottom screws.

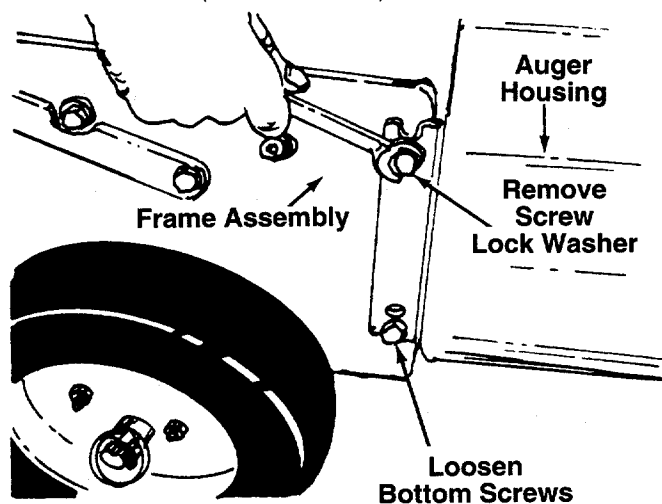


FIGURE 32.

6. To separate the auger housing from the frame assembly, two people are required. One person is in the operating position. Squeeze the auger clutch grip (right hand) as you raise up on the handles. See figure 33. The other person is in front of the unit. Push down on the housing or optional drift cutters. See figure 33. The unit will separate into two pieces.

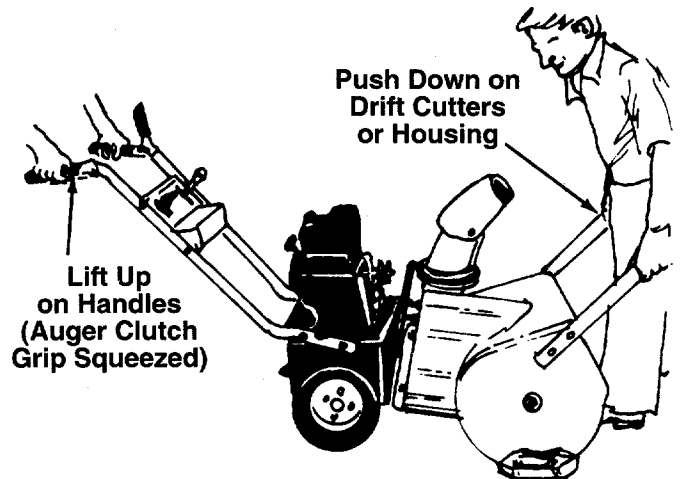


FIGURE 33.

7. To Remove Auger Drive Belt:
 - a. Remove the hex screw and belleville washer from the center of the pulley on the auger housing. Remove the pulley. See figure 34. Be careful not to lose the key.

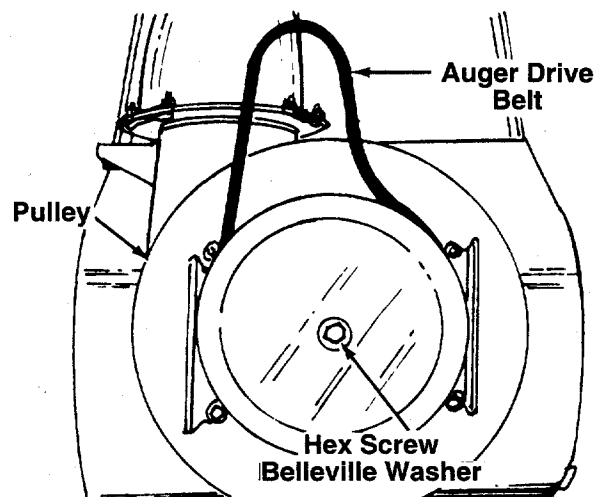


FIGURE 34.

- b. Remove and replace auger drive belt.
- c. Reassemble pulley to auger housing with hex screw and belleville washer (cupped side is toward the pulley). Be certain key is in place on shaft.

8. To Remove Drive Belt:
 - a. Remove the cotter pin which holds the linkage rod to the idler bracket assembly. See figure 35.
 - b. Unhook extension spring from the engine plate. See figure 35.

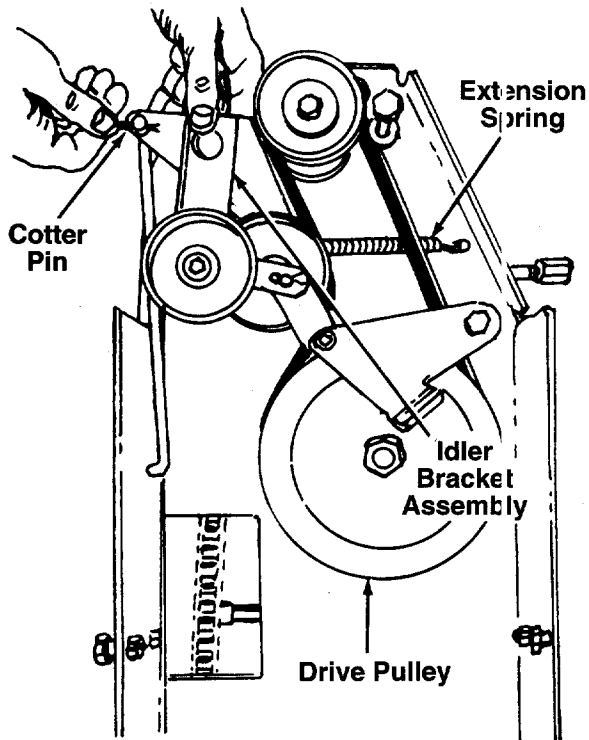


FIGURE 35.

- c. Remove drive belt from the engine pulley and bottom drive pulley.
 - d. Replace belt and reassemble in reverse order.
9. Reassemble the two halves of the unit. Two people are required.

NOTE: If the two halves do not reassemble easily, the idler pulley and/or the brake shoe may be behind the large pulley.

10. Secure the two halves with the two screws and lock washers.
11. Slip the auger drive belt over engine pulley.
12. Reassemble the large shoulder bolt, spacer and belleville washer as shown in figure 30. Belleville washer goes on shoulder bolt between the idler bracket assembly and engine plate (cupped side toward engine plate).

NOTE: Shoulder of the bolt must go through both sides of idler bracket assembly.

13. Reassemble belt cover and chute crank.
14. Remove plastic film from gas cap.

Changing the Friction Wheel

1. Tip the snow thrower forward and let it rest on the housing or optional drift cutters.
2. Remove the four self-tapping screws holding the rear cover.
3. Slide out the rear cover.
4. Using two 1/2" wrenches, loosen and then remove the three hex nuts and lock washers holding the friction wheel to the friction wheel adapter. See figure 36.

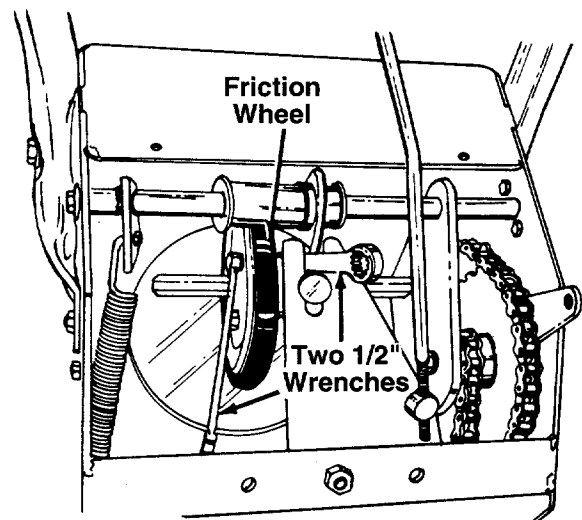


FIGURE 36.

5. Slide the friction wheel off the end of the hex shaft. See figure 37.

NOTE: It may be necessary to strike the friction wheel with a soft hammer to knock it loose.

6. Assemble the new friction wheel so the cupped side is towards the friction wheel adapter.
7. Fasten the friction wheel to the friction wheel adapter with the three lock washers and hex nuts. Tighten each nut in rotation until they are finger tight. Spin the wheel to see that it is not cocked on the hub. Then tighten using two 1/2" wrenches.

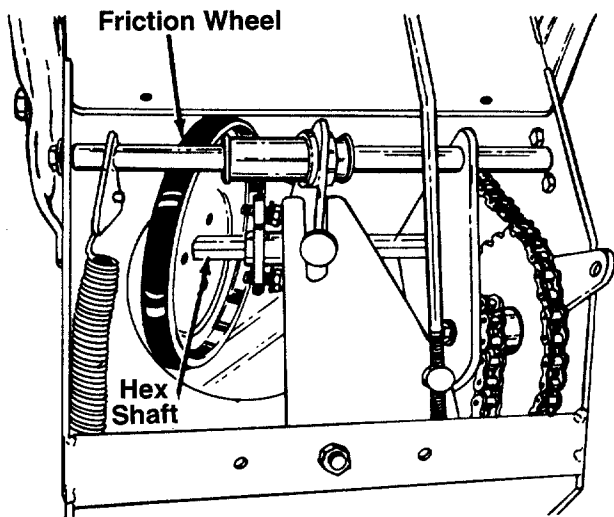


FIGURE 37.

8. Replace the rear cover.



WARNING: Check engine and snow thrower frequently for loose nuts, bolts, etc. and keep these items tightened.

OFF-SEASON STORAGE



WARNING: Never store engine with fuel in tank indoors or in poorly ventilated areas, where fuel fumes may reach an open flame, spark or pilot light as on a furnace, water heater, clothes dryer or other gas appliance.

If unit is to be stored over 30 days, prepare for storage as follows:

1. Remove all gasoline from carburetor and fuel tank to prevent gum deposits from forming on these parts and causing possible malfunction of engine.
 - a. Run engine until fuel tank is empty and engine stops due to lack of fuel.
 - b. Drain carburetor by pressing upward on bowl drain, located below the carburetor cover.



WARNING: Drain fuel into approved container outdoors, away from open flame. Be certain engine is cool. Do not smoke.

Fuel left in engine during warm weather deteriorates and will cause serious starting problems.

NOTE: Fuel stabilizer (such as STA-BIL) is an acceptable alternative in minimizing the formation of fuel gum deposits during storage. Add stabilizer to gasoline in fuel tank or storage container. Always follow mix ratio found on stabilizer container. Run engine at least 10 minutes after adding stabilizer to allow it to reach carburetor. Do not drain carburetor if using fuel stabilizer.

2. Remove spark plug and pour one (1) ounce of engine oil through spark plug hole into cylinder. Crank engine several times to distribute oil. Replace spark plug.
3. Remove all dirt from exterior of engine and equipment.
4. Follow lubrication recommendations on page 13.

NOTE: When storing any type of power equipment in an unventilated or metal storage shed, care should be taken to rust proof the equipment. Using a light oil or silicone, coat the equipment, especially any chains, springs, bearings and cables.

TROUBLE SHOOTING GUIDE

Trouble	Possible Cause(s)	Corrective Action
Engine fails to start	<ol style="list-style-type: none"> 1. Fuel tank empty, or stale fuel. 2. Blocked fuel line. 3. Key not in switch on engine. 4. Spark plug wire disconnected. 5. Faulty spark plug. 	<ol style="list-style-type: none"> 1. Fill tank with clean, fresh gasoline. 2. Clean fuel line. 3. Insert key. 4. Connect wire to spark plug. 5. Clean, adjust gap or replace.
Engine runs erratic	<ol style="list-style-type: none"> 1. Unit running on CHOKE. 2. Blocked fuel line or stale fuel. 3. Water or dirt in fuel system. 4. Carburetor out of adjustment. 	<ol style="list-style-type: none"> 1. Turn choke knob to OFF position. 2. Clean fuel line; fill tank with clean fresh gasoline. 3. Use carburetor bowl drain to drain fuel tank. Refill with fresh fuel. 4. Adjust carburetor. See separate engine manual.
Loss of power	<ol style="list-style-type: none"> 1. Spark plug wire loose. 2. Gas cap vent hole plugged. 	<ol style="list-style-type: none"> 1. Connect and tighten spark plug wire. 2. Remove ice and snow from cap. Be certain vent hole is clear.
Engine overheats	<ol style="list-style-type: none"> 1. Engine oil level low. 2. Carburetor not adjusted properly. 	<ol style="list-style-type: none"> 1. Fill crankcase with proper oil. 2. Adjust carburetor. See separate engine manual.
Excessive vibration	Loose parts or damaged impeller.	Stop engine immediately and disconnect spark plug wire. Tighten all bolts and nuts. Make all necessary repairs. If vibration continues, have unit serviced by authorized service dealer.
Hard to shift, or will not shift	Shift rod misadjusted.	Readjust shift rod. See Adjustment section of this manual.
Unit fails to propel itself	<ol style="list-style-type: none"> 1. Unit in neutral. 2. Klick pins not in proper position. 3. Incorrect adjustment of drive clutch. 4. Drive belt loose or damaged. 	<ol style="list-style-type: none"> 1. Move shift lever to one of the forward speeds or reverse (readjust shift rod if needed). 2. Place klick pins in wheel hub. 3. Adjust drive clutch. Refer to Adjustment section. 4. Replace drive belt. Refer to Maintenance section.
Unit fails to discharge snow	<ol style="list-style-type: none"> 1. Auger shear bolt broken. 2. Discharge chute clogged. 3. Foreign object lodged in auger. 4. Incorrect adjustment of auger drive clutch. 5. Auger drive belt loose or damaged. 	<ol style="list-style-type: none"> 1. Replace auger shear bolt. Refer to Maintenance section. 2. Stop engine immediately and disconnect spark plug wire. Clean discharge chute and inside of auger housing. 3. Stop engine immediately and disconnect spark plug wire. Remove object from auger. 4. Adjust auger clutch. Refer to Adjustment section. 5. Replace auger drive belt. Refer to Maintenance section.

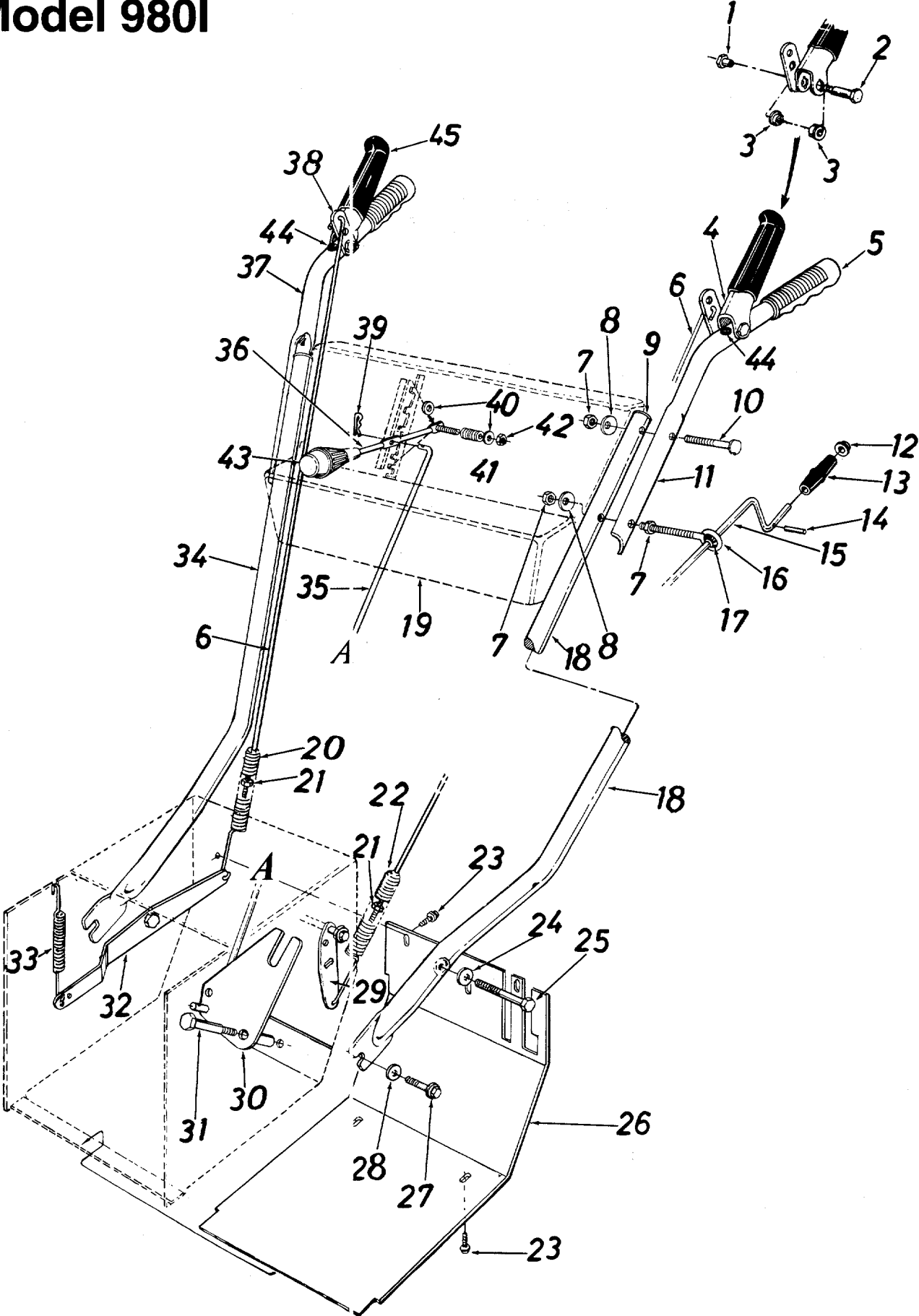
NOTE: For repairs beyond the minor adjustments listed above, please contact your nearest authorized service dealer.

OPTIONAL EQUIPMENT

At the time of manufacture of snow thrower, the following optional equipment is available.

Description	Kit No.
110 Volt Electric Start Kit:	390-987
Tire Chains: 16 x 6.5	390-146
Snow Shield:	390-674
Drift Cutter Kit:	390-679
Replacement Skid Shoe Kit:	390-680
Headlight Kit:	390-255

Model 980I



Model 980I

PARTS LIST FOR MODEL 980I SNOW THROWER

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	738-0561		Shld. Nut 1/4-20 Thd.	23	710-0600		Hex Wash. Hd. Self-Tap Scr.
2	738-0560		Shld. Bolt .374 Dia. x 1.375" Lg.				5/16-24 x .50" Lg.
3	741-0402		Hex Flange Plastic Bearing	24	736-0105		Bell-Wash. .40" I.D. x .88" O.D.
			.38" I.D.	25	710-0427		Hex Bolt 3/8-16 x 2.0" Lg.*
4	05987		Clutch Grip Ass'y.—L.H.	26	784-5131B	638	Frame Cover
5	720-0220		Grip—Red	27	710-0555		Pilot Hex Scr. 3/8-16 x .88" Lg.
	720-0180		Grip—Black	28	736-0105		Bell-Wash. .40" I.D. x .88" O.D.
6	747-0461		Lockout Rod	29	05500		Drive Clutch Brkt. Ass'y.
7	712-0267		Hex Nut 5/16-18 Thd.*	30	784-5133		Shifting Linkage Brkt. Ass'y.
8	736-0242		Bell-Wash. .34" I.D. x .88" O.D.	31	738-0129		Shld. Bolt .498 Dia. x 2.0" Lg.
9	731-0496		Plastic Plug	32	05518B		Auger Clutch Brkt.
10	710-0487		Curved Carriage Bolt	33	732-0303		Extension Spring .38" O.D. x
			5/16-18 x 2.0" Lg.				3.18" Lg.
11	749-0595		Upper Handle—L.H.	34	749-0406		Lower Handle—R.H.
12	726-0100		Push Nut 3/8" Rod	35	747-0356A		Shifting Rod
13	720-0201A		Knob 3/8" Rod	36	747-0696		Shift Handle
14	715-0138		Roll Pin .12 Dia. x .631" Lg.	37	749-0596		Upper Handle—R.H.
15	05980		Chute Crank Ass'y.	38	05988		Clutch Grip Ass'y.—R.H.
16	747-0416A		Eye Bolt 5/16-18 x 5.0" Lg.	39	714-0104		Int. Cotter Pin 5/16" Dia.
17	741-0475		Plastic Bushing	40	736-0264		FI-Wash. .344" I.D. x .62" O.D.
18	749-0405		Lower Handle—L.H.	41	732-0193		Compression Spring
19	784-5451	638	Handle Panel Ass'y.	42	712-0429		Hex Ins. L-Nut 5/16-18 Thd.
20	732-0463		Extension Spring .75" O.D.	43	720-0218		Knob
			x 5.0" Lg.	44	726-0247		Push Cap
21	712-0324		Hex Ins. L-Nut 1/4-20 Thd.	45	731-0473		Black Vinyl Grip
22	732-0184		Extension Spring .75" O.D.				
			x 5.0" Lg.				

*For faster service obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

CODE: N notates a **new part** (not previously existing). A three digit number is the **color code**. Specify color code as shown below if color or finish is important when ordering parts. [i.e., 638 for Red Finish].

Color Codes

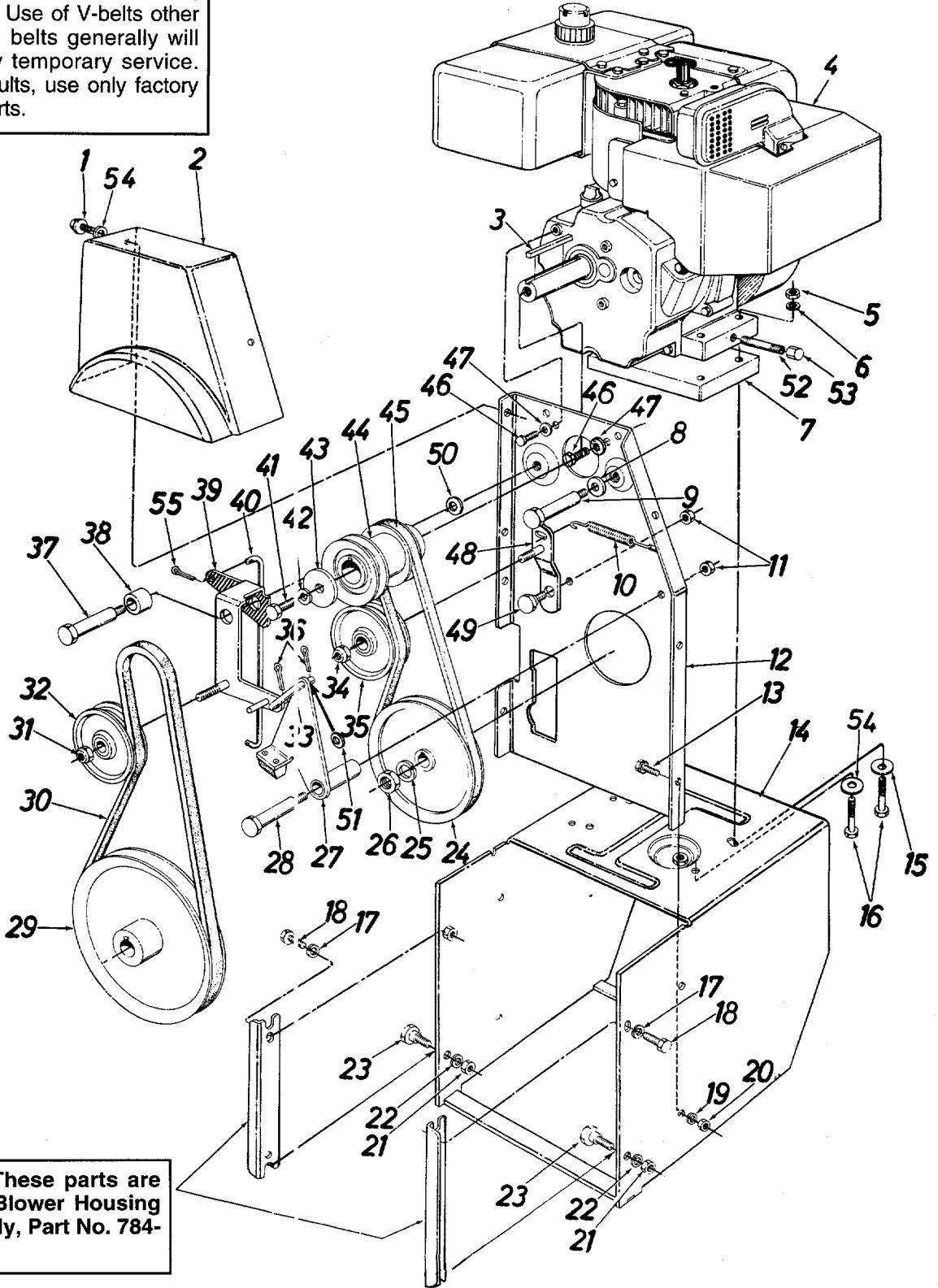
456—Radiant Tangerine	637—Black
460—Green Flake	638—Red
483—Charcoal Gray	640—Green
498—Yellow	646—CM Blue
499—Beige	657—Teal
629—Silver Flake	



Specifications subject to change without notice or obligation.

Model 980I

IMPORTANT: Use only Original Equipment Manufacturer (O.E.M.) V-belts when replacing belts. They are of special construction (type of cord, cord location, length, etc.). Use of V-belts other than O.E.M. belts generally will provide only temporary service. For best results, use only factory approved parts.



NOTE: These parts are part of Blower Housing Assembly, Part No. 784-5011.

Model 980I

PARTS LIST FOR MODEL 980I SNOW THROWER

REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	710-0726		Hex AB-Tap Scr. 5/16 x .75" Lg.	32	756-0240		FI-Idler w/Flanges 3.0 O.D.
2	731-0321		Belt Cover	33	05531		Brake Linkage Ass'y.
3	714-0118		Sq. Key 1/4" x 1.50" Lg.	34	712-0116		Hex Ins. Jam L-Nut 3/8-24 Thd.
4	—		Engine	35	756-0240		3.0" O.D. FI-Idler w/Flanges
5	712-0267		Hex Nut 5/16-18 Thd.*	36	714-0507		Int. Cot. Pin 3/32" Dia.
6	736-0119		L-Wash. 5/16" I.D.*	37	738-0282		Shld. Bolt .625" Dia. x 2.750" Lg.
7	717-0882		Engine Spacer Ass'y.				
8	736-0105		Bell-Wash. .40 I.D. x .88 O.D.	38	750-0227		Spacer .75 O.D. x 1.00" Lg.
9	738-0215A		Shld. Bolt .498" Dia. x 3.00" Lg.	39	05493		Blower Idler Brkt. Ass'y.
10	732-0303		Ext. Spring .38 O.D. x 3.18" Lg.	40	747-0149		Auger Clutch Rod .31" Dia. x 10.62" Lg.
11	712-0375		Hex Cent. L-Nut 3/8-16 Thd.				
12	05491A		Engine Brkt. Ass'y.	41	710-0191		Hex Bolt 3/8-24 x 1.25" Lg.
13	710-0198		Hex Sems Scr. 5/16-18 x .75" Lg.*	42	736-0217		L-Wash. 3/8" I.D. H.D.
				43	07386		FI-Wash.
14	784-5129B		Frame Ass'y.	44	756-0241B		Engine Pulley—Double Groove
15	736-0231		FI-Wash. .344" I.D. x 1.125" O.D. x .12"	45	754-0131		"V"-Belt
				46	710-0237		Hex Bolt 5/16-24 x .62" Lg.*
16	710-0395		Hex Bolt 5/16-18 x 2.25" Lg.*	47	736-0242		Bell-Wash. .345 I.D. x .88 O.D. x .060
17	736-0217		L-Wash. 3/8" I.D. H.D.				
18	710-0555		Pilot Scr. 3/8-16 x .88" Lg.	48	05495		Drive Idler Brkt. Ass'y.
19	736-0119		L-Wash. 5/16" I.D.*	49	738-0281		Shld. Bolt—.625" Dia. x .170" Lg.
20	712-0267		Hex Nut 5/16-18 Thd.*				
21	712-0798		Hex Nut 3/8-16 Thd.*	50	736-0219		Bell-Wash. .40 I.D. x 1.12 O.D.
22	736-0217		L-Wash. 3/8" I.D. H.D.	51	736-0117		FI-Wash. .385" I.D. x .620" O.D.
23	738-0143		Shld. Bolt .498" Dia. x .340" Lg.	52	737-0130		Pipe Nipple—1/4" Pipe Thd. x 3.5" Lg.
24	756-0344		V-Pulley .628 I.D. x 7.50 O.D.				
25	736-0158		L-Wash. for 5/8" I.D.*	53	737-0132		Hex Hd. Cap 1/4-18 Pipe Thd.
26	712-0221		Hex Ins. Jam L-Nut 5/8-18 Thd.	54	736-0264		FI-Wash. .344" I.D. x .62" O.D. x .63"
27	05510		Brake Brkt. Ass'y.				
28	738-0129		Shld. Bolt .498" Dia. x 2.00" Lg.	55	714-0104		Int. Cot. Pin 5/16" Dia.
29	756-0243		V-Pulley .875 I.D. x 10.12 O.D.	—	725-0954		Ignition Key (Not Shown)
30	754-0194		"V"-Belt	—	390-987		Electric Start Kit (Not Shown)†
31	712-0116		Hex Ins. Jam L-Nut 3/8-24 Thd.				

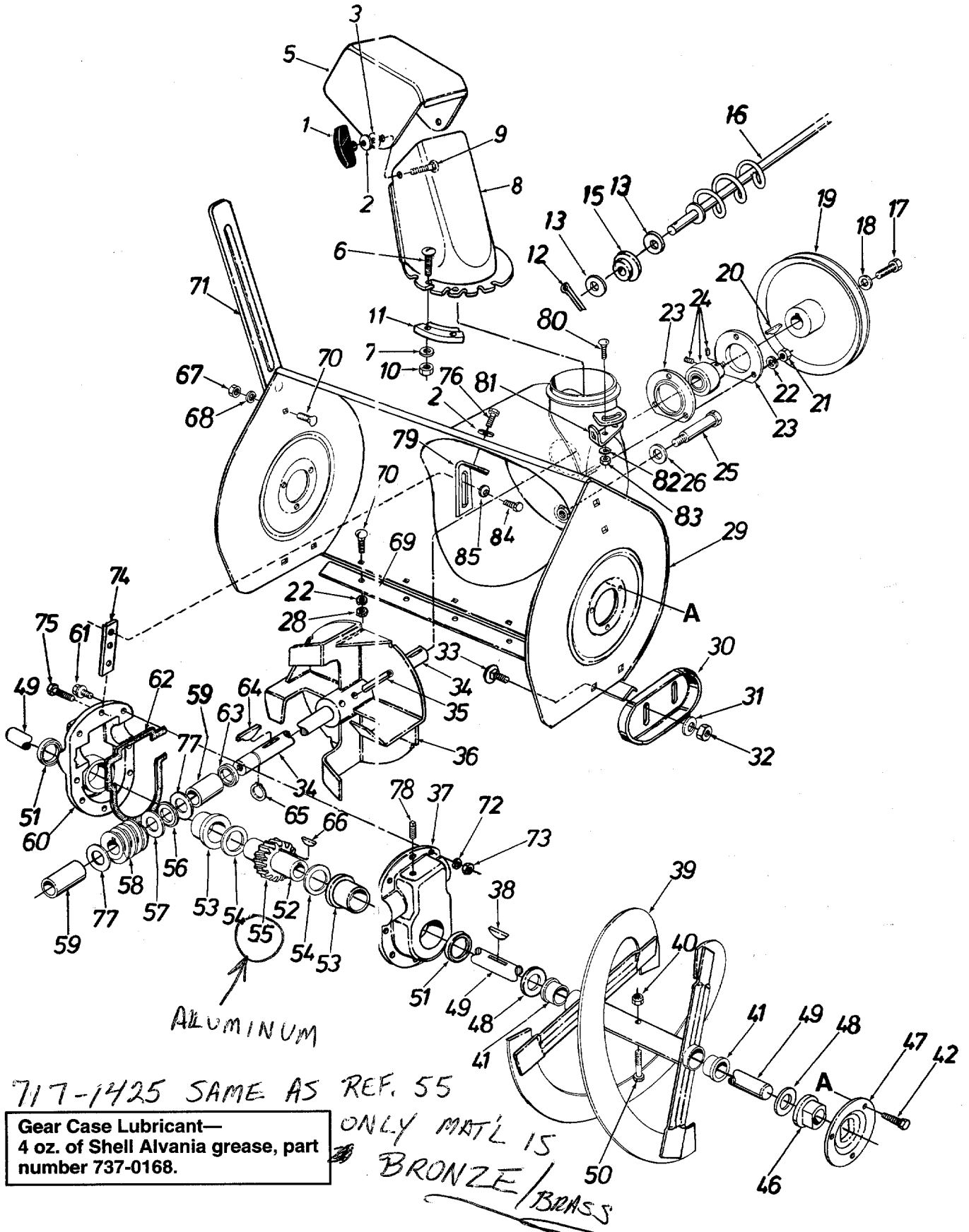
†Optional Parts

*For faster service obtain standard nuts, bolts and washers locally. If these items cannot be obtained locally, order by part number and size as shown on parts list.

NOTE: The engine is not under warranty by the mower manufacturer. . .If repairs or service is needed on the engine, please contact your nearest authorized engine service outlet. Check the "Yellow Pages" of your telephone book under "Engines—Gasoline."



Model 980I



717-1425 SAME AS REF. 55

Gear Case Lubricant—
 4 oz. of Shell Alvania grease, part
 number 737-0168.

ONLY MAT'L IS
 BRONZE/BRASS

Model 980I

PARTS LIST FOR MODEL 980I SNOW THROWER

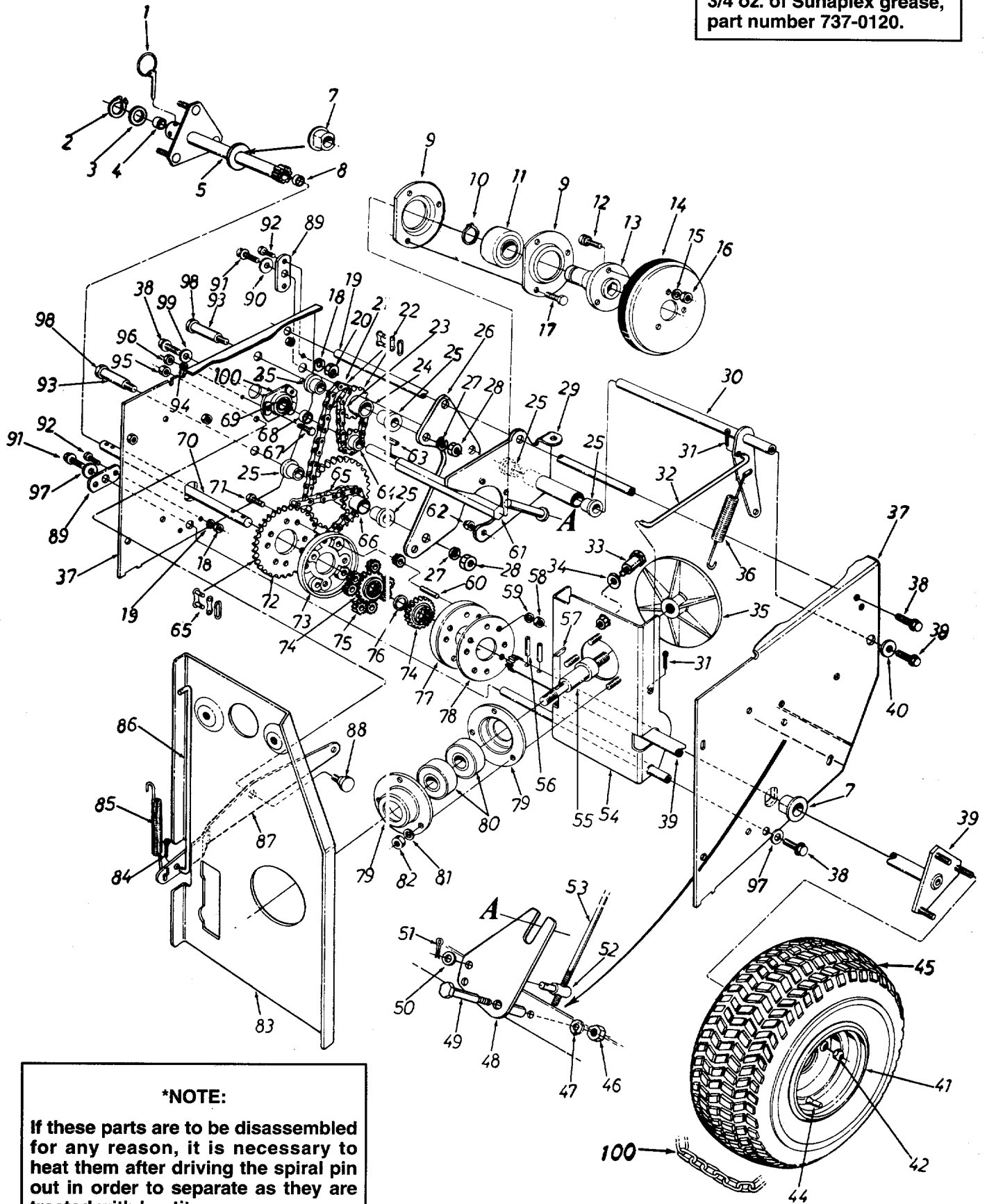
REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	09966		Hand Knob Ass'y.	46	741-0192		Flange Brg. w/Flats 1.0" I.D.
2	736-0242		Bell-Wash. .345 I.D. x .88 O.D. x .060	47	05845		Bearing Hsg.—Spiral Hsg.
3	736-0231		Fl. Wash. .312 I.D. x 1.125 O.D. x .125	48	736-0250		Fl-Wash. 1.06 I.D. x 1.75" O.D. x .100
5	731-0846B		Top Chute	49	738-0491		Spiral Axle
6	710-0255		Truss Mach. Scr. 1/4-20 x .75"	50	710-0891		Hex Bolt 5/16-18 x 1.75" Lg.
7	736-0142		Fl-Wash. 1/4" I.D.	51	721-0146		Oil Seal 1.50" I.D.
8	731-0840B		Chute	52	738-0275		Worm Gear Shaft
9	710-0276		Carr. Bolt 5/16-18 x 1.00" Lg.	53	741-0182		Flange Brg. 1.503 I.D.
10	712-0107		Hex Cent. L-Nut 1/4-20 Thd.	54	736-0266		Fl-Wash. 1.5 I.D. x 2.0 O.D.
11	731-0851		Chute Flange Keeper	55	717-0300		Double Threaded Worm Gear
12	714-0507		Cotter Pin	56	741-0184		Thrust Brg. .88 I.D. x 1.44 O.D. x .078
13	736-0140		Fl-Wash. .385" I.D. x .62"	57	736-0291		Fl-Wash. .88 I.D. x 1.40 O.D.
15	741-0475		Bushing	58	717-0299		Double Threaded Worm—L.H.
16	05980		Chute Crank Ass'y.	59	741-0217		Sleeve Brg. .875 I.D.
17	710-0371		Hex L-Scr. 5/16-18 x .88" Lg.	60	717-0298		Complete Gear Hsg. Half— R.H. (Incl. Ref. Nos. 51 & 53)
18	736-0242		Bell-Wash. .345 I.D. x .88	61	710-0376		Hex Bolt 5/16-18 x 1.0" Lg.
19	756-0243		V-Pulley .875 I.D. x 10.12	62	721-0144		Gasket
20	714-0126		#9 Hi-Pro Key 3/16 x 3/4" Dia.	63	721-0145		Oil Seal .875" I.D.
21	712-0267		Hex Nut 5/16-18 Thd.*	64	714-0126		#9 Hi-Pro Key 3/16 x 3/4" Dia.
22	736-0119		L-Wash. 5/16" I.D.*	65	716-0111		Snap Ring—.875" Dia.
23	05244		Bearing Hsg.—Self Aligning Brg.	66	714-0135		#91 Woodruff Key 1/4 x 3/4" Dia.
24	741-0185		Self Aligning Brg. .875 I.D.	67	712-0267		Hex Nut 5/16-18 Thd.*†
25	711-0640		Stud 3/8-16 x 2.75" Lg.	68	736-0119		L-Wash. 5/16" I.D.*†
26	736-0105		Bell-Wash. .400 I.D. x .88 O.D. x .060	69	05378		Shave Plate—33"
28	712-0267		Hex Nut 5/16-18 Thd.*	70	710-0260		Carr. Bolt 5/16-18 x .62" Lg.†
29	784-5011		Blower Hsg. Ass'y.	71	05139A		Drift Cutter†
30	784-5038A		Slide Shoe	72	736-0271		Wave Wash. 5/16" I.D.
31	736-0105		Bell-Wash. .400 I.D. x .88 O.D. x .060	73	712-0429		Hex Ins. L-Nut 5/16-18 Thd.
32	712-0342		Hex Jam Nut 3/8-16 Thd.	74	784-5075		Gear Hsg. Support Plate
33	710-0790		Carr. Bolt 3/8-16 x .62" Lg.	75	710-0528		Hex Bolt 5/16-18 x 1.25"*
34	738-0276		Blower Axle	76	710-0726		Hex Wash. Hd. Self-Tap Scr. 5/16-18 x .75" Lg.
35	715-0118		Spring Pin Spiral 5/16" Dia. x 1.75" Lg.	77	736-0291		Fl-Wash. .88 I.D. x 1.40 O.D.
36	05812		Blower Fan Ass'y.	78	737-0175		Filler Plug
37	717-0297		Complete Gear Hsg. Half— L.H. (Incl. Bearing)	79	784-5076		Gear Hsg. Support Brkt.
38	714-0135		#91 Woodruff Key 1/4" x 3/4" Dia.	80	710-0451		Carr. Bolt 5/16-18 x .75" Lg.*
39	05461		Spiral Ass'y.—L.H.	81	784-5123		Chute Crank Bracket
40	05462		Spiral Ass'y.—R.H.	82	736-0242		Bell-Wash. .345 I.D. x .88"
41	712-0429		Hex Ins. L-Nut 5/16-18 Thd.	83	712-0267		Hex Nut 5/16-18 Thd.*
42	741-0494		Plastic Bushing	84	710-0412		Hex Bolt 1/4-28 x .75" Lg.*
	710-0726		Hex Wash. Hd. Self-Tap Scr. 5/16-24 x .62" Lg.	85	736-0270		Bell-Wash. .28" I.D. x .75" O.D.
				—	717-0296		Gear Box Ass'y. Comp.

†Optional Parts

*For faster service obtain standard nuts, bolts and washers locally.
If these items cannot be obtained locally, order by part number
and size as shown on parts list.

Model 980I

Differential Lubricant—
3/4 oz. of Sunaplex grease,
part number 737-0120.



***NOTE:**
If these parts are to be disassembled for any reason, it is necessary to heat them after driving the spiral pin out in order to separate as they are treated with loc-tite.

Model 980I

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REF. NO.	PART NO.	CODE	DESCRIPTION	REF. NO.	PART NO.	CODE	DESCRIPTION
1	714-0143		Klick Pin 1/4" Dia. x 1.75"	51	714-0507		Cotter Pin 3/32" Dia. x .75"
2	716-0115		Snap Ring .625" Shaft	52	711-0628A		Adjustment Ferrule
3	736-0187		FI-Wash. .62" I.D. x 1.25"	53	747-0356		Shifting Rod
4	741-0305		Sleeve Brg. (Must Be Drilled After Press Fit)	54	05497		Drive Plate Mtg. Brkt. Ass'y.
5	05637		Differential Tubing Ass'y.—R.H.	55	738-0279		Drive Plate Spindle
7	741-0192		Flange Brg. w/Flats 1" I.D.	56	715-0136		H-Spring Pin Spiral 3/16" Dia. x 1.25" Lg.
8	741-0305		Sleeve Brg.	57	714-0388		#61 Hi-Pro Key 3/16 x 5/8" Dia.
9	05794		Bearing Housing	58	712-0138		Hex Nut 1/4-28 Thd.
10	716-0102		Snap Ring—1.00" Dia.	59	736-0329		L-Wash. 1/4" I.D.*
11	741-0301		Ball Brg. .25MM x 52MM x 15MM Thk.	60	738-0304		Differential Pin
12	710-0198		Hex Sems Bolt 5/16-18 x .75" Lg.*	61	738-0280		Hex Shaft
13	748-0281		Friction Wheel Adapter	62	712-0896		Hex L-Nut 1/4-28 Thd.
14	05080A		Friction Wheel Ass'y.	63	714-0129		#9 Hi-Pro Key 3/32 x 5/8" Dia.
15	736-0119		L-Wash. 5/16" I.D.*	64	748-0204		8 Teeth Sprocket
16	712-0267		Hex Nut 5/16-18 Thd.*	65	713-0269		#420 Chain—.50 Pitch x 37 Links
17	710-0195		Hex Bolt 1/4-28 x .62" Lg.*	66	713-0154		Master Link
18	736-0329		L-Wash. 1/4" I.D.*	67	713-0194		9 and 32 Teeth Sprocket Hub Ass'y.
19	738-0278		Sliding Support Axle	67	710-0258		Hex Bolt 1/4-20 x .62" Lg.*
20	712-0287		Hex Nut 1/4-20 Thd.*	68	750-0277		Spacer .51" I.D. x .69" O.D.
21	713-0270		#41 Chain—1/2" Pitch x 43 Links	69	741-0133		Ball Bearing
22	713-0723		Master Link	70	738-0284		Differential Connecting Shaft
23	713-0199		#41 Chain—1/2" Pitch x 19 Links	71	710-0559		Hex Bolt 1/4-28 x 1.75" Lg.*
	713-0723		Master Link	72	713-0198		28 Teeth Sprocket
24	713-0193		9 and 14 Teeth Sprocket Hub Ass'y.	73	748-0222		Differential Housing
25	748-0184		Flange Brg. .630" I.D.	74	748-0224		20 Tooth Spur Gear
26	05520		Chain Support Brkt.	75	748-0223		9 Tooth Spur Gear
27	736-0217		L-Wash. 3/8" I.D.—H.D.	76	736-0187		FI-Wash. .62" I.D. x 1.25"
28	712-0116		Hex L-Jam Nut 3/8-24 Thd.	77	748-0222		Differential Housing
29	784-5137		Sliding Brkt. Ass'y.	78	05484		Differential Hsg. Support Plate
30	05500		Drive Clutch Brkt. Ass'y.	79	08253B		Bearing Housing
31	714-0104		Inter. Cot. Pin 5/16" Dia.	80	741-0919		Ball Brg. .787" I.D. x 1.85"
32	747-0150		Drive Clutch Rod 7.38" Lg.	81	736-0119		L-Wash. 5/16" I.D.*
33	738-0144		Shld. Bolt	82	712-0267		Hex Nut 5/16-18 Thd.*
34	736-0105		Bell-Wash. .44" I.D. x .88"	83	05491A		Engine Brkt. Ass'y.
35	717-0302		Aluminum Drive Plate	84	714-0104		Inter. Cotter Pin 5/16" Dia.
36	732-0121		Extension Spring 4.31" Lg.	85	732-0303		Extension Spring 3.18" Lg.
37	784-5129B		Frame Ass'y.	86	747-0149		Auger Clutch Rod .31" Dia. x 10.62" Lg.
38	710-0538		Hex L-Bolt 5/16-18 x .62"	87	05518B		Auger Clutch Brkt.
39	05820B		Differential Shaft Ass'y.	88	738-0281		Shld. Bolt .625" Dia. x .170"
40	736-0264		FI-Wash. .345" I.D. x .75"	89	05523		Pivot Axle Brkt.
41	09262		Rim Only—16"	90	736-0264		FI-Wash. .345" I.D. x .75"
42	712-0193		Cone Nut 3/8-24 Thd.	91	710-0538		Hex L-Bolt 5/16-18 x .62"
44	734-0255		Tubeless Air Valve	92	710-0258		Hex Bolt 1/4-20 x .62" Lg.*
45	734-1526		Wheel Ass'y. Comp. 16 x 6.5	93	750-0275		Sprocket Hub Tubing 1.88"
	734-1525		Tire Only 16 x 6.5	94	736-0329		L-Wash. 1/4" I.D.*
46	712-0342		Hex Jam Nut 3/8-16 Thd.	95	712-0375		Hex Cent. L-Nut 3/8-16 Thd.
47	736-0169		L-Wash. 3/8" I.D.*	96	712-0287		Hex Nut 1/4-20 Thd.*
48	784-5133		Shift Linkage Brkt. Ass'y.	97	736-0159		FI-Wash. .344" I.D. x .875"
49	738-0129		Shld. Bolt .498" Dia. x 2.005" Lg.	98	710-0629		Hex Bolt 3/8-24 x 2.75" Lg.*
50	736-0264		FI-Wash. .344" I.D. x .62"	99	736-0242		Bell-Wash. .345" I.D. x .88"
				100	390-0146		Tire Chain (Optional)

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**FOR REPLACEMENT PARTS, CONTACT:
SERVICE DEPARTMENT • P.O. BOX 360900 • CLEVELAND, OHIO 44136**